

**APPENDIX A**  
**CORRESPONDENCE**



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SUMMARY OF AGENCY CORRESPONDENCE AND PUBLIC INVOLVEMENT  
FOR THE  
ENVIRONMENTAL ASSESSMENT FOR INTEGRATED FIXED TOWERS ON THE  
TOHONO O'ODHAM NATION AJO AND CASA GRANDE STATIONS' AREAS OF  
RESPONSIBILITY

In accordance with 40 C.F.R. Parts 1501.7, 1503, and 1506.6, U.S. Customs and Border Protection (CBP) initiated agency scoping and public involvement to identify significant issues related to the Proposed Action for the *Environmental Assessment for Integrated Fixed Towers (IFT) on the Tohono O'odham Nation in the Ajo and Casa Grande Stations' Areas of Responsibility U.S. Border Patrol Tucson Sector, Arizona, U.S. Customs and Border Protection Department of Homeland Security, Washington, D.C* (hereinafter "EA"). This appendix summarizes these efforts.

## **A.1 AGENCY SCOPING**

### **A.1.1 Site Selection Process**

CBP project team personnel began working with representatives from the Tohono O'odham Nation to identify tower site locations in 2009. CBP and representatives from the Tohono O'odham Nation conducted site visits of proposed and alternate IFT sites in July 2012. In September 2012, council members from the Gu-Vo District visited the proposed IFT site locations with CBP. The Gu-Vo council members requested the relocation of TCA-AJO-0456 due to its proximity to a culturally sensitive area. A new location was selected during the visit (TCA-AJO-0462) and TCA-AJO-0456 was removed from consideration. Council members representing the Chukut Kuk visited the proposed IFT site locations with CBP in October 2012. The Chukut Kuk council members did not object to the proposed IFT site locations. On May 7, 2013, the Tohono O'odham Nation passed Resolution 13-142 authorizing CBP to conduct an EA and pre-development activities.

### **A.1.2 Cooperating Agency Acceptance**

In accordance with 40 C.F.R. 1501.6, CBP invited the Tohono O'odham Nation and the Bureau of Indian Affairs (BIA) to participate as cooperating agencies in the development of the EA via letters dated May 23, 2013, September 19, 2013, and November 15, 2013. BIA accepted CBP's offer via letter dated September 25, 2013. The Tohono O'odham Nation Legislative Council passed Resolution No. 15-479 on December 8, 2015, providing conditional support of the IFT project.

### **A.1.3 Project Scoping**

CBP sent scoping letters to federal, state, and local agencies and representatives within the Tohono O'odham Nation on May 28, 2013. CBP received response letters from the Arizona State Historic Preservation Office, U.S. International Boundary and Water Commission (IBWC), and U.S. Fish and Wildlife Service. Table A-1 provides a list of federal, state, and local agencies

and representatives within the Tohono O'odham Nation who CBP requested information from during preliminary project scoping.

**Table A-1. Addressee List for Project Scoping and Cooperating Agency Letters**

Organization	Name	Title	Address	Scoping Letter Date
Bureau of Indian Affairs	Amy Heuslein	Western Region Environmental Protection Officer	2600 N. Central Avenue 4th Floor Mailroom Phoenix, AZ 85004-3050	05/23/2013
Bureau of Indian Affairs	Ms. Nina Siqueiros	Superintendent	P.O. Box 490 Sells, AZ 85634	05/23/2013* 09/19/2013
Tohono O'odham Nation	Honorable Ned Norris	Chairman	Main Street Building #49 Sells, AZ 85634	05/23/2013** 11/15/2013
Arizona State Parks	Mr. James Garrison	State Historic Preservation Officer	1300 West Washington Street Phoenix, Arizona 85007	05/28/2013
Arizona Department of Environmental Quality	Mr. Henry Darwin	Director	1110 West Washington Street Phoenix, AZ 85007	05/28/2013
Arizona Department of Environmental Quality	Ms. Edna Mendoza	Director	400 West Congress, Suite 433 Tucson, AZ 85701	05/28/2013
Arizona Game & Fish Department	Ms. Laura Canaca	Project Evaluation Program Supervisor	5000 W. Carefree Highway Phoenix, AZ 85086-5000	05/28/2013
Arizona Game & Fish Department	Mr. John Windes	Habitat Program Manager	555 N. Greasewood Road Tucson, AZ 85023	05/28/2013
U.S. Environmental Protection Agency Region 9	Mr. Nova Blazej	Manager Environmental Review Office Coordinator	75 Hawthorne Street San Francisco, CA 94105	05/28/2013
U.S. Environmental Protection Agency	Ms. Lisa Hanf	Office of Federal Activities	75 Hawthorne Street San Francisco, California 94105	05/28/2013
U.S. Fish & Wildlife Service	Mr. Steve Spangle	Field Supervisor	2321 West Royal Palm Road, Suite 103 Phoenix, AZ 85021-4915	05/28/2013
U.S. Fish & Wildlife Service	Jean Calhoun	Assistant Field Supervisor	2321 West Royal Palm Road, Suite 103 Phoenix, AZ 85021-4915	05/28/2013
Department of Interior	Mr. Jon Andrew	CBP Liaison	1849 C Street, NW MS 3428 Washington, DC 20240	05/28/2013
U.S. Army Corps of Engineers	Ms. Marjorie Blaine	Senior Project Manager	5205 East Comanche Street Tucson, AZ 85707	05/28/2013

U.S. Army Corps of Engineers	Colonel Thomas H. Magness	District Commander	915 Wilshire Boulevard Suite 980 Los Angeles, California 90017	05/28/2013
International Boundary and Water Commission	Mr. Edward Drusina	Commissioner	4171 North Mesa Building C, Suite C-100 El Paso, TX 79902-1441	05/28/2013
International Boundary and Water Commission	Mr. Bernie Kruse	Supervisory General Engineer	4171 North Mesa Building C, Suite 310 El Paso, Texas 79902	05/28/2013
Pima County Board of Supervisors	Ms. Sharon Bronson	Supervisor, District 3	130 West Congress St., 11th floor Tucson, AZ 85701	05/28/2013
Pima County	Mr. Chuck Huckelberry	County Administrator	130 West Congress St., 10th Floor Tucson, AZ 85701	05/28/2013

\* The following individuals were copied on the letter to Nina Squieros: Amy Heuslein, BIA Branch Chief and Bernadette Blackwater, Tohono O'odham Nation Realty Office

\*\* The following individuals were copied on the letter to Chairman Norris: Peter Steere, THPO; Karen Howe, Natural Resources; Christopher Brooks, Water Resources; Gerald Fayuant, Director, Realty Office; Augustine Toro, Director, Natural Resources; Frances Conde, Chair, Legislative Cultural Preservation Committee; Lorraine Eiler, Chair, Legislative Natural Resources Committee; Ethel Garcia, Chair, Domestic Affairs Committee; Timothy Joaquin, Chairman, Tohono O'odham Legislative Council; Lorinda Sam, Director, Tohono O'odham Nation Environmental Protection Office

#### **A.1.4 Preliminary Draft Environmental Assessment**

A Preliminary Draft EA was submitted to representatives within CBP, BIA, and the Tohono O'odham Nation for a 30-day review in April 2014. In May 2015, CBP began hosting monthly coordination calls with representatives from the Tohono O'odham Nation and BIA to discuss the progress of the EA. At the request of the Tohono O'odham Nation, a Revised Preliminary Draft EA was prepared and submitted to representatives within CBP, BIA, and the Tohono O'odham Nation for a 45-day review in December 2015. CBP and BIA representatives reviewed and provided comments on the Preliminary Draft EA within the public comment period. Gu-Vo District Chairman Rodrick Manuel sent CBP a letter opposing the project dated January 29, 2016. Holly Barton, Tohono O'odham Nation Wildlife and Vegetation Program, sent CBP a letter dated February 1, 2016, requesting modification to a few best management practices.

#### **A.1.5 Draft Environmental Assessment**

CBP sent hard and electronic copies of the Draft EA to federal, state, and local agencies on April 5 and April 6, 2016, and to representatives within the Tohono O'odham Nation on April 13, 2016. The comment period concluded on May 16, 2016. Table A-3 provides a listing of all comments on the Draft EA from federal, state, or local agencies or tribal government that were received during the public comment period. IBWC was the only agency to provide comments on the Draft EA. CBP did not receive any comments from any other federal, state, or local agency or tribal government. Each row in the table presents the identification of the commenter, the comment, and CBP's response to the comment. Comments appear as they were submitted and have not been altered with the exception that attachments and personal information were

removed, as necessary. Responses to all comments were prepared and reviewed for scientific and technical accuracy and completeness.

**Table A-2. Addressee List for Draft Environmental Assessment**

Organization	Name	Title	Address	Transmittal Letter Date
Bureau of Indian Affairs Western Regional Office	Mr. Charles Lewis	Environmental Protection Specialist	2600 N. Central Avenue 4th Floor Mailroom Phoenix, AZ 85004-3050	March 31, 2016
Bureau of Indian Affairs Papago Agency	Ms. Nina Siqueiros	Superintendent	P.O. Box 490 Sells, AZ 85634	March 31, 2016
Tohono O'odham Nation*	Honorable Edward Manuel	Chairman	Main Street Building #49 Sells, AZ 85634	March 31, 2016
Tohono O'odham Nation Realty Papago Agency	Ms. Bernadette Blackwater	Realty Officer	BIA Circle, Building #49 Sells, AZ 85634	March 31, 2016
Arizona Department of Environmental Quality	Misael Cabrera	Director	1110 West Washington Street Phoenix, AZ 85007	March 31, 2016
Arizona Department of Environmental Quality	Ms. Amanda Stone	Director	400 West Congress, Suite 433 Tucson, AZ 85701	March 31, 2016
Arizona Game & Fish Department	Ms. Joyce Francis	Habitat Branch Chief	5000 W. Carefree Highway Phoenix, AZ 85086-5000	March 31, 2016
Arizona Game & Fish Department	Mr. John Windes	Habitat Program Manager	555 N. Greasewood Road Tucson, AZ 85023	March 31, 2016
Bureau of Land Management	Mr. Raymond Suazo	State Director	One North Central Avenue, Suite 800 Phoenix, AZ 85004	March 31, 2016
U .S. Environmental Protection Agency	Ms. Karen Vitulano	NEPA Reviewer	75 Hawthorne Street San Francisco, CA 94105	March 31, 2016
U.S. Environmental Protection Agency	Ms. Kathleen Hoforth	Manager Environmental Review Section	75 Hawthorne Street San Francisco, California 94105	March 31, 2016
Federal Aviation Administration	Mr. Thomas Cuddy	Environmental Specialist	800 Independence Ave, SW Washington, DC 20591	March 31, 2016
U.S. Fish & Wildlife Service	Mr. Steve Spangle	Field Supervisor	2321 West Royal Palm Road, Suite 103 Phoenix, AZ 85021-4915	March 31, 2016
U.S. Fish & Wildlife Service	Jean Calhoun	Assistant Field Supervisor	2321 West Royal Palm Road, Suite 103 Phoenix, AZ 85021-4915	March 31, 2016
Department of Interior	Mr. Jon Andrews	Chief, Interagency Borderlands	1200 N. Queen St. # 238 Washington, D.C. 22209	March 31, 2016

U.S. Army Corps of Engineers	Colonel Kirk Gibbs	Commander	915 Wilshire Boulevard Suite 980 Los Angeles, California 90017	March 31, 2016
International Boundary and Water Commission	Mr. Edward Drusina	Commissioner	4171 North Mesa Building C, Suite C-100 El Paso, TX 79902-1441	March 31, 2016
International Boundary and Water Commission	Mr. Jose Nunez	Principal Engineer	4171 North Mesa Building C, Suite 310 El Paso, Texas 79902	March 31, 2016
Pima County Board of Supervisors	Ms. Sharon Bronson	Supervisor, District 3	130 West Congress St., 11th floor Tucson, AZ 85701	March 31, 2016
Pima County	Mr. Chuck Huckelberry	County Administrator	130 West Congress St., 10th Floor Tucson, AZ 85701	March 31, 2016

\* The following individuals were copied on the letter to Chairman Manuel: Verlon M. Jose, Vice Chairman; Gerald Fayuant, Executive Director, Planning & Economic Development; Marlakay Henry, Executive Director, Natural Resources; Director, Tohono O'odham Nation Environmental Protection Office; Peter Steere, Tribal Historic Preservation Officer; Holly Barton, Wildlife & Vegetation Management Program; Christopher Brooks, Water Resources; Timothy Joaquin, Chairman, Legislative Council; Racheal Vilson-Stoner San Xavier, Vice Chairwoman, Legislative Council; Lucinda Allen, Legislative Representative; Pamela Anghill, Legislative Representative; Ethel Garcia, Legislative Representative; Billman Lopez, Legislative Representative; Grace Manuel, Legislative Representative; Arthur Wilson, Legislative Representative; Elaine Delahanty, Chukut Kuk District Chairwoman; and Roderick Manuel, Sr., Gu-Vo District Chairman

**Table A-3. Comments from Federal, State, and Local Agencies on Draft Environmental Assessment and CBP's Responses**

Commenter	Comment	Response
Nunez, Joseph (USIBWC)	<p>The United States Section, International Boundary and Water Commission (USIBWC) has received the draft Environmental Assessment (EA) for the Integrated Fixed Towers on the Tohono O'odham Nation in the Ajo and Casa Grande Stations' Areas of Responsibility.</p> <p>The USIBWC had previously commented during the scoping period that the construction should remain outside the Roosevelt Easement and that there should be no increased flood waters in Mexico as a result of the project.</p> <p>The maps contained within demonstrate that the towers and building do lie outside the easement, however, the hydrology section do no demonstrate any diversions of flood flows nor is there reference to any hydrologic studies. For the final EA, please include any study results that the effects on the stormwater due to construction activities."</p>	<p>Thank you for your participation in the National Environmental Policy Act (NEPA) process. CBP submitted a draft version of the road design to USIBWC (Application Number: 2016-44), who have provided comments, which are being incorporated into the design. CBP received a follow-up letter from USIBWC, dated August 29, 2016, stating that USIBWC does not object to the Proposed Action. The measures USIBWC proposed in that letter have been adopted in Section 5.0 of the EA.</p>



### **A.1.6 Final Environmental Assessment**

Representatives of the Tohono O'odham Nation and BIA assisted CBP with preparing the Final EA and Finding of No Significant Impact (FONSI), which included drafting responses to public comments. BIA is preparing a separate FONSI for the issuance of Rights-of-Way (ROWs) to CBP to perform the Proposed Action. BIA would issue the ROWs upon the consent of the Tohono O'odham Nation.

### **A.1.7 Consultation with U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act**

CBP conducted biological surveys of all disturbance areas and prepared, with the assistance of the Tohono O'odham Nation and BIA, a biological assessment (February 2014) and two revised biological assessments (August 2014 and March 2016) for the proposed action, which were submitted to USFWS. CBP received USFWS concurrence that the proposed action may affect, but is not likely to adversely affect, the Sonoran pronghorn (*Antilocapra americana sonoriensis*), jaguar (*Panthera onca*), lesser long-nosed bat (*Leptonycteris curasoae yerbabuena*), and yellow-billed cuckoo (*Coccyzus americanus*) under Section 7 of the Endangered Species Act.

### **A.1.8 Consultation with State/Tribal Historic Preservation Office under Section 106 of the National Historic Preservation Act**

CBP conducted archaeological surveys of all disturbance areas and prepared cultural resource survey reports that were submitted to the Tohono O'odham Nation Tribal and Historic Preservation Office (THPO). CBP received the Tohono O'odham Nation THPO's concurrence that the proposed action would not adversely affect any historic or cultural resource under Section 106 of the National Historic Preservation Act. CBP has incorporated the measures proposed in the THPO's memorandum, dated 15 February 2017, in Section 5.0 of the EA.

### **A.1.9 Other Federal/State/Local Consultation**

CBP is currently consulting with U.S. Army Corps of Engineers and Environmental Protection Agency under Sections 401 and 404 of the Clean Water Act as well as USIBWC. CBP received a letter from USIBWC, dated August 29, 2016, stating that the USIBWC does not object to the Proposed Action. CBP has adopted the measures USIBWC proposed in Section 5.0 of the EA.

## **A.2 PUBLIC INVOLVEMENT**

The public involvement began on April 12, 2016, with the issuance of the Notice of Availability for the Draft EA. The public comment period for the Draft EA began on Friday, April 15, 2016, and concluded on Monday, May 16, 2016.

### **A.2.1 Project Website**

CBP established a project website for the EA and posted a Notice of Availability for the Draft EA at <http://www.cbp.gov/about/environmental-cultural-stewardship/nepa-documents/docs->

[review](#) on April 14, 2016. The website announced the public comment period for the Draft EA and included a summary of the proposed action as well as electronic copies of the Draft EA and Draft FONSI. The Final EA will be available on the CBP website.

### **A.2.2 Newspaper Display Advertisements**

CBP published Notices of Availability in the *Arizona Daily Star* on April 12, 2016, the Tohono O’odham Nation’s *The Runner* on April 15, 2016, and the *Ajo Copper News* on April 15, 2016. The newspaper advertisements announced the public comment period for the Draft EA and included a summary of the proposed action. CBP would publish a Notice of Availability following signature of the FONSI.

### **A.2.3 Local Libraries**

Hard copies of the Draft EA were made available to the public during the public comment period at the Tohono O’odham Community College Library in Sells, the Venito Garcia Library and Archives in Sells, and the Pima County Public Library in Tucson.

### **A.2.4 Public Comments**

Commenters provided their input on the Draft EA to Mr. Paul C. Schmidt, CBP Office of Technology Innovation and Acquisition Environmental Branch Manager, using the following methods:

U.S. Mail:	Mr. Paul C. Schmidt, U.S. Customs and Border Protection, Office of Technology Innovation and Acquisition, 1901 S. Bell Street, Suite 600, Arlington, VA 20598
Facsimile:	(571) 468-7391
E-mail:	OTIAENVIRONMENTAL@cbp.dhs.gov via email

During the public comment period, comments were received from one non-governmental organizations and 28 private individuals. Table A-4 provides a listing of all comments on the Draft EA from non-governmental organizations, universities, or private individuals that were received during the public comment period. Each row in the table presents the identification of the commenter, the comment, and CBP’s response to the comment. Comments appear as they were submitted and have not been altered with the exception that attachments and personal information were removed, as necessary. Responses to all comments were prepared and reviewed for scientific and technical accuracy and completeness. Comments received after the close of the public comment period, if any, are not included in Table A-4.

**Table A-4. Public Comments on Draft Environmental Assessment and CBP's Responses**

Commenter	Comment	Response
PC_ Conti_Giovanni	<p>Please do not palce[sic] surveillance towers on the Tohono O'odham Nation. The Gu-Vo District Governing Council has clearly stated they do not want the towers on their lands. I am asking you to show them some respect.</p> <p>One of the towers would be on a sacred burial site and six would be in or near their communities.</p> <p>Respect the Gu-Vo District position of "NO IFTs whatsoever."</p> <p>Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places.</p> <p>Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.</p> <p>Respect the Gu-Vo District's efforts to protect future generations.</p>	<p>Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p> <p>As described in Chapter 3.12 of the EA, CBP contract archaeologists have performed pedestrian surveys of all proposed disturbance areas. The contract archaeologists did not identify any burial grounds within the disturbance area of any tower site. CBP completed consultation with the Tohono O'odham Nation Tribal Historic Preservation Office under Section 106 of the National Historic Preservation Act and received their concurrence that the project would not adversely affect any cultural or historic resources.</p>
PC_Bennett_Nancy 1	<p>I am writing in strong opposition to the construction of the 15 DHS surveillance towers on the Tohono O'odham nation.</p> <p>As proposed:</p>	<p>Thank you for your participation in the NEPA process. Your comment has been broken down into component parts to ensure that all comments provided in your email are addressed. This portion of the comment does not contain a specific question or inquiry related to the EA; therefore, no response is provided.</p>
PC_Bennett_Nancy 2	<p>--these would include several towers on or adjacent to sacred burial sites.</p>	<p>As described in Chapter 3.12 of the EA, CBP contract archaeologists have performed pedestrian surveys of all proposed disturbance areas. The contract archaeologists did not identify any burial grounds within the disturbance area of any tower site. CBP completed consultation with the Tohono O'odham Nation Tribal Historic Preservation Office under Section 106 of the National Historic Preservation Act and received their</p>

		concurrence that the project would not adversely affect any cultural or historic resources.
PC_Bennett_Nancy 3	--involve creating more than 40 new roads on native land.	As described in Chapter 2.2.4 of the EA, the proposed project includes the construction of 14 new access roads (up to 0.24 miles total). All other roadwork would be improving existing roads, including the Traditional Northern Road (a.k.a. "The Border Road"), to allow for safe passage for construction and maintenance vehicles.
PC_Bennett_Nancy 4	<p>This \$145 million contract with Israeli defense contractor Elbit is opposed by tribal members, and is an obvious violation of native sovereignty.</p> <p>Please do NOT allow the construction of these surveillance towers on the Tohono O'odham nation.</p>	<p>Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p>
PC_Buchanan_Debby	<p>I am writing with regard to the Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation. As someone who has lived in Southern AZ for the majority of my life since the late 1950's, I am disturbed with the lack of regard or respect for the Tohono Nation in this proposal.</p> <p>If I understand it correctly, you are saying that these towers would have "no significant impact" on the land or the people of the targeted areas, even though the people and their representatives (especially in the western region) have clearly stated that they do not want them there. It was my further understanding that tribal lands were under tribal jurisdiction, so I am perplexed where your agency gets the idea that it's OK to ignore their express desires regarding this issue. It seems especially harsh to propose putting any towers in any area designated as burial grounds, which are sacred to native peoples.</p> <p>The callous indifference for any sacred traditions and the wishes of the people who live in the area seems arrogant at best. It is indicative of the lack or regard for what is best for the local people you will be invading with your roads, technology, and traffic. As someone who lives in an area where you already have a heavy presence, I am all too well aware of the questionable impact measures like this have on the local</p>	<p>Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p> <p>As described in Chapter 3.12 of the EA, CBP contract archaeologists have performed pedestrian surveys of all proposed disturbance areas. The contract archaeologists did not identify any burial grounds within the disturbance area of any tower site. CBP completed consultation with the Tohono O'odham Nation Tribal Historic Preservation Office under Section 106 of the National Historic Preservation Act and received their concurrence that the project would not adversely affect historic or cultural resources.</p>

	<p>population and environment.</p> <p>Such concerns are especially true when recent statistics show that the population of "illegal immigrants" is lower than it has been in decades, and that, in fact, there are more people leaving our country than there are coming in, making me, as a tax-payer, question the expenditures for such projects.</p> <p>I sincerely think you should reconsider and be more honest about the effect your project will have on the the[sic] people who it will impact.</p>	<p>A finding of no significant impact is the appropriate determination for this action under NEPA, Council on Environmental Quality (CEQ) Regulations, 40 CFR Parts 1500-1508, and Department of Homeland Security (DHS) Directive 023-01 and Instruction 023-01-001-01.</p>
PC_Buthod_Jack	<p>You must respect the will of the Tohono O'odham nation to not have these towers on their land. Respect the Gu-Vo District position of "NO IFTs whatsoever." Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places. Respect the Gu-Vo District's efforts to protect future generations. Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.</p>	<p>Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation (including the Gu-Vo District) assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p>
PC_Daniello_Paul 1	<p>As the Tohono O'odham are sovereign nation, I think the Department needs to respect the wishes and concerns of the tribes. The Gu-Vo governing body has voted "No" to the proposed tower placement for reasons to protect and respect culturally important areas including ancient burial and ceremonial sites located there. Moreover, the Gu-Vo want to protect the area for future generations.</p>	<p>Thank you for your participation in the NEPA process. Your comment has been broken down into component parts to ensure that all comments provided in your email are addressed.</p> <p>As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation (including the Gu-Vo District) assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p>
PC_Daniello_Paul 2	<p>It is important to note that the proposed towers would be built by Elbit Systems, an Israeli[sic] organization, that placed similar units in Palestine to enforce ethnic segregation. The US Government should not reward Elbit for segregating societies.</p>	<p>This portion of the comment does not contain a specific question or inquiry related to the EA; therefore, no response is provided.</p>
PC_Downing_Deer	<p>I write urging you to stop the construction and development of the drone / surveillance program along the US southern border, most</p>	<p>Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the</p>

	<p>specifically, those proposed on the lands of the Tohono O’ogham[sic] Nation.</p> <p>If in “protecting” the borders we violate prior agreements made to the sovereign nation of the Tohono O’odham then what, of value, are we defending? Furthermore, do the effectiveness of these programs merit the cost?</p> <p>I think it is difficult for a nation of immigrants and their off spring—all of us new to these lands in relative terms, (myself included), to understand a deep relationship to Place.</p> <p>When we hear Native peoples plea with our government “not to defile sacred lands with towers, etc...,” we have no reference point with this depth of “relationship” to place.</p> <p>But will you please, , please employ deep listening and hear and respect the wishes of the peoples of the Tohono O’odham to stop this program on their lands?</p> <p>Please DO NOT move forward with this program. The US government agreed to the formation of the sovereign land mass for the Tohono O’odham Nation.</p> <p>Surely, these towers are in direct violation of that agreement, which brings me back to my first question:</p> <p>What exactly are we protecting / defending if we are a nation of bullies who break agreements when interests serve a powerful few?</p> <p>If that is our new way, then, what is their of value to protect?</p> <p>Thank you in advance for your consideration.</p>	<p>Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p>
<p>PC_Esquibel_Catriona Rueda</p>	<p>I oppose the construction of 15 surveillance towers near the US/Mexico border on the Tohono O'odham Nation. I urge you to respect the voices of Native Tohono O'odham leaders who voted against allowing the Israeli company Elbit Systems to build surveillance towers on their land.</p> <p>Respect the Gu-Vo District position of NO IFTs whatsoever.</p> <p>Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places.</p> <p>Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.</p> <p>Respect the Gu-Vo District's efforts to protect future generations.</p>	<p>Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation (including the Gu-Vo District) assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p>
<p>PC_Garcia_Joshua 1</p>	<p>As a member of the community of Vamori located within the Chukut Kuk District of the Tohono O'odham Nation I disagree with the findings of the environmental impact report. I believe the construction of the proposed towers will negatively effect animal species that are either endangered or are at their northern limit.</p>	<p>Thank you for your participation in the NEPA process. Your comment has been broken down into component parts to ensure that all comments provided in your email are addressed.</p>

		<p>A description of the potential impacts to wildlife is available in Chapters 3.5 and 3.6 of the EA. As described in Chapter 3.6, CBP consulted with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, who concurred with CBP's determination that the project may affect, but is not likely to adversely affect, the jaguar, lesser long-nosed bat, Sonoran pronghorn, and yellow-billed cuckoo because these impacts would be discountable or insignificant. The anticipated cumulative impacts on threatened and endangered species are discussed in Chapter 4.4.5 of the EA.</p>
PC_Garcia_Joshua 2	<p>I also oppose the impact study because several of the sights of the proposed towers are in locations that are culturally significant to many families in the area. For example one location, Toro's Ranch is the location of a saguaro fruit harvesting camp. The proposed road will cut across an abandoned community called Wakimagi. Wakimagi is my families traditional farm sight . Another proposed sight is very near our family cemetery. Members of other communities have similar concerns. The impact report makes no reference to these concerns.</p>	<p>CBP would implement, to the maximum extent practicable, best management practices in order to avoid impacts to cultural resources. Toro's Ranch has been determined eligible for listing on the NRHP. As described in Section 3.12, CBP has committed to avoid adversely affecting sites of determined and undetermined NRHP eligibility. CBP completed consultation with the Tohono O'odham Nation Tribal Historic Preservation Office under Section 106 of the NHPA and received their concurrence that the project would not adversely affect cultural or historic resources. Although no activities are proposed to occur within a known traditional saguaro fruit harvesting area, CBP has revised Chapter 5.5 in the Final EA to include a best management practice, which would avoid interfering with traditional saguaro fruit harvesting areas.</p>
PC_Gentry_Blake 1	<p>The proposed tower TCA-CAG-0430 is within PCE # 6, a designated Jaguar habitat area according to the US Fish and Wildlife Service (p.7). The entire project will have on negative on-going effects after construction and local disturbance from associated road building for service and maintenance of the towers for the jaguar, an endangered species, and I quote the US Fish and Wildlife Service Commission statement:</p>	<p>Thank you for your participation in the NEPA process. Your comment has been broken down into component parts to ensure that all comments provided in your email are addressed.</p> <p>As described in Chapter 3.6 of the EA, CBP has determined that the proposed action may affect but is not likely to adversely affect the jaguar. USFWS concurred with this determination. At the time of USFWS's scoping letter, TCA-CAG-0430 was within proposed critical habitat for the jaguar. TCA-CAG-</p>

		0430 is not within the final designated critical habitat for the jaguar. See 79 Fed. Reg. 12571-12654.
PC_Gentry_Blake 2	Given the historical encroachment of the US government's military operations on the Barry Goldwater Bombing Range which has damaged critical habitat for Pronghorn Sheep to the west of the proposed installation of seven towers (TCA-AJO-0530, TCA-AJO 0216, TCA-AJO 0460, TCAAJO 0462, TCA-AJO 0458, TCA-AJO 0545, TCA-AJO 0450) in the Quijotoa Valley, the installation of additional military and security surveillance infrastructure is a cost that outweighs the benefits of the theoretical policy goal of CBP of immigrant deterrence, and its primary mission of antiterrorism.	As described in Chapter 3.6 of the EA, CBP has determined and USFWS has concurred that the proposed action may affect but is not likely to adversely affect the Sonoran pronghorn. The anticipated cumulative impacts on threatened and endangered species are discussed in Chapter 4.4.5 of the EA.
PC_Gentry_Blake 3	<p>As a private citizen who continues to support Tohono O'odham, Hia Ched O'odham, and Akimel O'odham in Sonora and their right as legal tribal members of the Tohono O'odham Nation to access their own reservation in Arizona that resides within their original homeland, a territory bisected by the US border installations and personnel that increasingly employ hostile and restrictive actions against their movement as historically migratory peoples, and against those who attempt to enter the United States at the Lukeville Port of Entry but who are often delayed or refused entry into the United States so that they may access Indian Health Services as legal tribal members in Sells, Arizona and at other IHS facilities, the installation of more surveillance towers will increase the insecurity of the O'odham and force them to live with more losses of liberty and freedom of movement in the O'odham biome of the Lower Colorado River basin. They are also part of the "environment" that is affected by the proposed project.</p> <p>This project is a violation of the United Nations Declaration of the Rights of Indigenous Peoples, UNDRIP Article 7, which states,  1. Indigenous individuals have the rights to life, physical and mental integrity, liberty and security of person.  The construction of surveillance towers that loom over the low desert scrub is alien to the culture of the Tohono O'odham in their own land, and they are being forced to become estranged from their own land within their own land, and it is thus a violation of Article 8. Tohono O'odham will literally not have the right to harvest Saguaro fruit which is central to their ceremonial life without the presence of towers looming over their valleys and foothills. This is another step to be</p>	<p>Thank you for your participation in the NEPA process. CBP disagrees with the assertion that the project violates UNDRIP. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p> <p>CBP completed consultation with the Tohono O'odham Nation Tribal Historic Preservation Office under Section 106 of the NHPA and received their concurrence that the project would not adversely affect any cultural or historic resources. CBP would implement, to the maximum extent practicable, best management practices in order to avoid adversely affecting cultural resources. These best management practices were prepared with the assistance and guidance of the Tohono O'odham Nation Tribal Historic Preservation Office. A summary of the best management practices for cultural resources for this project are available in Chapter 5.5 of the EA. Although no activities are proposed to occur within a known traditional saguaro fruit harvesting area, CBP has revised Chapter 5.5 in the Final EA to include a best</p>



	<p>taken by security personnel and military contractors that literally impedes their capacity to peacefully harvest Saguaro fruits, collect cholla buds, and materials for basket making, and other O’odham cultural practices without the presence of non-O’odham since they will be subject to CBP surveillance and will have no protection from Border Patrol responding to their presence in their own desert land as stated in articles 8 and 11:</p> <p>UNDRIP Article 8</p> <p>1. Indigenous peoples and individuals have the right not to be subjected to forced assimilation or destruction of their culture.</p> <p>UNDRIP Article 11</p> <p>1. Indigenous peoples have the right to practice and revitalize their cultural traditions and customs. This includes the right to maintain, protect and develop the past, present and future manifestations of their cultures, such as archaeological and historical sites, artefacts, designs, ceremonies, technologies and visual and performing arts and literature. A means test of the absurd idea that O’odham will continue to practice their religion would be the equivalent of placing a tower in the middle of a church or Synagogue which spies on all the parishioners, in the very twisted logic of the US Congress and the their security force, the Customs and Border Patrol, “for their own protection.”</p> <p>The continued forced separation of O’odham in Sonora from the O’odham on the Papago reservation in Arizona, where many have family members living presently will be furthered by the refusal of the US CBP to act with impunity as they deny entry to the O’odham in Sonora because they do not have the financial means to meet the requirements for US visas to travel to their own homeland under current US law. The towers will further make it illegal for O’odham in Sonora to exercise their tribal rights as members of the Tohono O’odham nation, which is some 2,221 people.</p> <p>For these stated reasons, and due to the impoverishment of the O’odham due to US negligence after 82 years of the presence of the Dept., of the Interior to historically account for the Tohono, Akimel, and Hia Ched O’odham customary migration patterns within their customary biomes, I oppose this project and believe it will cause permanent environmental damage. It is tantamount to a form of ecocide which denies the O’odham ecological existence in their lands as indigenous peoples, and it is therefore a form of genocide.</p> <p>As a member of the largest tribe in the United States, the tribe that had it’s homeland taken by US executive order over and above the decision</p>	<p>management practice, which would avoid interfering with traditional saguaro fruit harvesting areas.</p>
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	of the US Supreme Court, I am well aware of the permanent nature of this proposed action and the form of genocide it has taken. If this project is completed, every US official, domestic and foreign contractor, US government agency, and US congressional person involved in this militarization of indigenous O'odham lands will be guilty of genocide, and their succeeding generations will bear the mark of being the offspring of a genocidal peoples for seven generations.	
PC_Layton_Kendra 1	I am writing regarding the construction of fixed towers on Tohono O'odham Nation. I strongly oppose this measure as it has multiple environmental and social impacts. I am a public educator in Colorado and I have spent time along the U.S. Mexican border in Nogales, Arizona, next to Tohono O'odham land. Firstly, the construction of towers disrupts the ecosystem and desert wildlife. It impedes their movement, territories, and reproduction.	<p>Thank you for your participation in the NEPA process. Your comment has been broken down into component parts to ensure that all comments provided in your email are addressed.</p> <p>The EA describes the impact to wildlife and their habitat in Chapter 3.5. CBP would implement, to the maximum extent practicable, best management practices in order to minimize and reduce potential impacts to wildlife. A summary of the best management practices is available in Chapter 5 of the EA.</p>
PC_Layton_Kendra 2	Secondly, the towers do not respect tribal sovereignty of the Tohono O'odham Nation, as the measure is opposed by tribal members. Based on these considerations I strongly oppose the construction of fixed towers on the Nation and urge you to stop this endeavor.	<p>Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p>
PC_Lewis_Eva 1	I am writing to express deep opposition to the construction of the proposed Integrated Fixed Towers (IFT). These towers are an affront to O'odham national sovereignty. The Gu-Vo district's governing council already firmly stated their opposition to the towers being built on their land.	<p>Thank you for your participation in the NEPA process. Your comment has been broken down into component parts to ensure that all comments provided in your email are addressed.</p> <p>As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation (including the Gu-Vo District) assisted with the preparation of this EA and the selection of tower site locations as described in</p>

		Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.
PC_Lewis_Eva 2	The current locations where they are to be built are on sacred O'odham burial[sic] grounds and in the midst of O'odham communities. Respect should be shown for the O'odham people and their right to protect and preserve their sacred sites and communities.	As described in Chapter 3.12 of the EA, CBP contract archaeologists have performed pedestrian surveys of all proposed disturbance areas. The contract archaeologists did not identify any burial grounds within the disturbance area of any tower site. CBP completed consultation with the Tohono O'odham Nation Tribal Historic Preservation Office under Section 106 of the National Historic Preservation Act and received their concurrence that the project would not adversely affect any cultural or historic resource. CBP would implement, to the maximum extent practicable, best management practices in order to avoid potential impacts to cultural or historic resources. These best management practices were developed with the assistance of the Tohono O'odham Nation Tribal Historic Preservation Office. A summary of the best management practices for cultural resources is available in Chapter 5.5 of the EA.
PC_Lewis_Eva 3	No studies have been done to show what effect these towers will have on the migration pattern of bees or other wildlife fundamental to the ecosystems of these borderlands.	CBP has used the best available science in preparing the EA. According to the U.S. Department of Agriculture, "Despite a great deal of attention having been paid to the idea, neither cell phones nor cell phone towers have been shown to have any connection to [colony collapse disorder] or poor honey bee health." USDA, <i>ARS Honey Bee Health and Colony Collapse Disorder</i> , <a href="https://www.ars.usda.gov/News/docs.htm?docid=15572">https://www.ars.usda.gov/News/docs.htm?docid=15572</a> . CBP revised Section 3.5 accordingly. As described in Chapter 3.6 of the EA, CBP has been performing studies on the impact surveillance towers could have on lesser long-nosed bats since 2010 in accordance with the biological opinions for SBInet AJO-1 (AESO/SE: 22410-F-2009-0089 and 22410-1989-0078-R6) and Tucson West (AESO/SE22410-2008-F-0373).
PC_Lewis_Eva 4	There are grave environmental and social concerns about the construction of the proposed IFT. The United States government should respect the authority of the Gu-Vo district to make decisions regarding what happens on their land and to preserve the environment and the	Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among

	land by protecting it for future generations. This means not building IFT's.	other things, the Tohono O'odham Nation (including the Gu-Vo District) assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.
PC_M_Sarah	<p>I oppose this plan.</p> <p>Please respect the Gu-Vo District position of NO IFTs whatsoever.</p> <p>Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places.</p> <p>Respect the authority of Gu-Vo District as Odham[sic] authority, voice of Odham[sic] Communities and community members.</p> <p>Respect the Gu-Vo District's efforts to protect future generations.</p>	<p>Thank you for your participation in the NEPA process.</p> <p>As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation (including the Gu-Vo District) assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p>
PC_Manning_Patricia	<p>I wish to express my strongest opposition to expanding the proposed towers into the Tohono O'odham nation's lands. It would mean the further violation of tribal sovereignty, in continued disregard for indigenous authority and spiritual sites and sensibilities.</p> <p>It would also mean further turning our beloved borderlands into an increasingly militarized zone of reduced constitutional protections and increased surveillance, which creates fear as well as further mistrust and division among our residents and neighbors.</p> <p>Moreover, the fragility of the habitat means that further incursions such as these would lead to increasing, widespread degradation of the flora and fauna of our unique, beloved desert homelands.</p> <p>The money spent on ultimately ineffective and highly intrusive technologies such as these would be much better spent on investing in a Marshall-type Plan for investing in economic development in Central America and Mexico which would allow the subsequent development of their human capital, functioning judicial systems, and economic opportunities, to help them stem the impunity, structural and reactive violence, and unrelenting poverty that force so many of their citizens to flee.</p> <p>This proposal for more IFTs on TO land does nothing to address the</p>	<p>Thank you for your participation in the NEPA process.</p> <p>Thank you for your participation in the NEPA process.</p> <p>As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p> <p>As stated in Chapter 2.5, the proposed action meets the purpose and need for the project. A "Marshall-type plan" or equivalent economic rescue plan for Mexico and Central America is outside the scope of the current proposed action, nor would it fully meet the purpose and need for the action.</p>

	root causes of migration[sic], and adds to the growing harms to nations, cultures, landscapes and animals, caused by the official[sic] reactive, isolationist, shortsighted policy of a militarized border.	
PC_Mayaan_Deborah 1	The proposed towers have an adverse effect on wildlife, particularly endangered jaguars	Thank you for your participation in the NEPA process. Your comment has been broken down into component parts to ensure that all comments provided in your email are addressed. As described in Chapter 3.6, CBP has determined and USFWS and the Tohono O'odham Nation Wildlife and Vegetation Management Program have concurred that the proposed action may affect but is not likely to adversely affect the jaguar, lesser long-nosed bat, Sonoran pronghorn, and yellow-billed cuckoo.
PC_Mayaan_Deborah 2	and are a violation of indigenous peoples' rights according to the United Nations Declaration of the Rights of Indigenous Peoples, UNDRIP Article 7.	CBP disagrees with the assertion that the proposed action would violate UNDRIP Article 7. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort and implementation of the project is dependent on their consent. As stated in Chapter 1.2 of the EA, the project is needed, <i>inter alia</i> , to enhance the safety of border communities.
PC_Miller_Paula	I am writing to comment on the draft EA and draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation in Southern Arizona. I am a resident of Southern Arizona and have spent much time hiking the Sonoran desert. I have seen first hand the devastating impact the border surveillance has done in the desert. I am opposed to additional towers and new roads being constructed in this area including the Tohono O'odham Nation. These towers and new roads will continue to disrupt the migration of wildlife, the natural flow of water and cultural and religious rituals of the Tohono O'odham. Please do not construct these towers or build these new roads. Thank you.	Thank you for your participation in the NEPA process. CBP would implement, to the maximum extent practicable, best management practices in order to minimize and reduce potential impacts to environmental and cultural resources. These best management practices were prepared with the assistance of the Tohono O'odham Nation. A summary of the best management practices for this project are available in Chapter 5 of the EA.
PC_Millis_Dan 1	Please accept the following comments on the Draft EA and Draft FONSI for Integrated Fixed Towers (IFT) on the Tohono O'odham Nation.  Founded in 1892, the Sierra Club is the oldest and largest conservation organization in the United States, with over 2.1 million members and supporters, including approximately 40,000 here in Arizona. Sierra Club's mission is to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's	Thank you for your participation in the NEPA process. Your comment has been broken down into component parts to ensure that all comments provided in your email are addressed. This portion of the comment does not contain a specific question or inquiry related to the EA; therefore, no response is provided.

	<p>ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives. We have been campaigning with a specific focus on the protection and preservation of the U.S.-Mexico borderlands in southern Arizona since 2006, and our nationally-organized Borderlands Team works to educate policymakers, members, and the public at large about border environmental issues. Our members have been involved in advocating for lands, waters, and wildlife in the border region for decades.</p>	
PC_Millis_Dan 2	<p><b>INTRODUCTION</b> Remote surveillance towers have a variety of environmental and community impacts that are not yet fully understood. Their level of impact to sensitive resources and species will depend upon the number of towers, the locations where towers are sighted, how Border Patrol operations are conducted on the ground, and, most importantly, the level of environmental planning, assessment, and mitigation undertaken by Homeland Security.</p> <p>Given the size and scope of the Tohono O’odham IFT Tower Project, and its proximity to the Organ Pipe Cactus National Monument (OPCNM) and the sensitive species and resources therein, it is necessary to conduct a full Environmental Impact Statement (EIS) in accordance with the process established under the National Environmental Policy Act (NEPA). The waiver of 37 federal laws, including NEPA, issued April 1, 2008 by former Department of Homeland Security (DHS) Secretary Chertoff, applies only to barriers and roads, not to this project. Therefore, the Tohono O’odham IFT Tower Project and its associated infrastructure must be subject to the NEPA process and a full EIS must be produced.</p>	<p>CBP agrees that the project is subject to NEPA but respectfully disagrees with the need for an Environmental Impact Statement (EIS) for this project. As stated in the Finding of No Significant Impact, the proposed action would not result in a significant impact on the environment and an EIS is not required under the NEPA, CEQ Regulations, DHS Directive 023-01, or DHS Instruction 023-01-001-01.</p>
PC_Millis_Dan 3	<p>Seven of the proposed new construction towers would be sited in the Gu-Vo District. The Gu-Vo District has made DHS aware that it opposes all of these towers due to a variety of concerns, including impacts to mountains and sites that are sacred, of historical significance, ceremonial, or otherwise important to residents of the Gu-Vo District. It is not clear from available documentation that DHS understands the full range of impacts that this project would have on the people, landscapes, wildlife, and resources of the project area, and the opposition letter signed by Gu-Vo District Chairman Rodrick Manuel, Sr. and Vice Chairman Angelita Castillo indicates to us that</p>	<p>As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O’odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O’odham Nation assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O’odham Nation.</p>

	proper on-the-ground and interagency consultation either has not occurred, or has failed.	
PC_Millis_Dan 4	The Draft EA and FONSI of the Tohono O’odham IFT Tower Project also fails to address the issue of operations, which is of primary importance to the mitigation of impact to the resources of the Tohono O’odham Nation and the adjoining OPCNM. For the Tohono O’odham IFT Tower Project to function in a manner compatible with the preservation of these resources, it must be demonstrated that the project will allow for the reduction of operational impacts to the Tohono O’odham Nation, not just by shifting the field of operational engagement elsewhere, but by keeping Border Patrol operations more contained and reducing impacts such as off-road vehicle tracks and disturbance of local communities and tribal members. Operational impacts, including cross-country driving, disturbance of sensitive resources, etc, may be reduced if the towers successfully allow Border Patrol to operate closer to established roadways, but the Draft EA and FONSI fail to demonstrate how this will occur.	Chapter 1.2 of the EA describes the purpose and need for the proposed action, which includes a need to enhance the deterrence of illegal cross-border activity. Chapter 3 discusses the foreseeable direct and indirect impacts of the three assessed alternatives.
PC_Millis_Dan 5	In addition, impacts to quality of life and privacy of those living within sight of these facilities have not been given due consideration or properly analyzed by CBP, as indicated by the formal opposition of the Gu-Vo District.	As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O’odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O’odham Nation (including the Gu-Vo District) assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O’odham Nation. As described in Table 3-1, a detailed statement on the sociological impacts of the alternatives is not needed for this project.
PC_Millis_Dan 6	Given that the proposed tower locations will be permanent in nature, it is imperative that the number of towers and locations be thoroughly researched to minimize foreseeable impacts, and that further research is done to assess the nature of these impacts, especially in community and wildland settings. Reasonable alternatives should be evaluated as should the cumulative impacts of this project.	CBP agrees that the project is subject to NEPA. CBP used the best available science in preparing the EA.
PC_Millis_Dan 7	The U.S. Fish and Wildlife Service and others have noted the need for additional research on electromagnetic radiation and other aspects of remote towers and related impacts to people, birds and wildlife.	CBP has used the best available science in preparing the EA and does not disagree with the need for additional research on electromagnetic radiation impacts, particularly on the avian brain (see Chapter 3.5.2).

		CBP has been performing studies on the impact electromagnetic radiation could have on lesser long-nosed bats since 2010. As described in Chapter 3.17, CBP follows the Federal Communication Commission safety guidelines for human exposure to microwave communication.
PC_Millis_Dan 8	Road improvement and maintenance should be planned and engineered for sustainable use in operation and maintenance of the towers, so that increased traffic on roads already abused by excessive Border Patrol traffic does not result in further damage at wash crossings, erosion and sedimentation problems	Proposed road improvements and maintenance are being engineered by U.S. Army Corps of Engineers for sustainable operational with the assistance of the Tohono O'odham Nation's engineers. Site-specific stormwater pollution prevention plans would be developed and all roadwork would be conducted in accordance with USACE Nationwide Permit 14, Linear Transportation Project and EPA Section 401 water quality certification.
PC_Millis_Dan 9	The 85-foot segment of new road construction adjacent to TCA-CAG-0434 appears to connect two roads which were not previously connected. If this is the case, impacts of increased traffic from this new interconnection should be addressed.	The road is an existing road. The map has been updated to show that this 85 feet of approach road to TCA-CAG-0434 would be improved, not constructed in the Final EA. No change to the text was required.
PC_Millis_Dan 10	Our review of the DEA has led us to conclude that it is unlawfully narrow because it fails to thoroughly consider any action alternatives of various tower number and array configurations, and also fails to consider other actions that could meet a better-expressed goal. In addition, the DEA provides a very shallow analysis of cumulative and synergistic effects of the proposed action and other ongoing border security infrastructure projects in the project area. The piecemeal Environmental Assessments completed by DHS/CBP in southern Arizona have been inadequate to assess the collective impacts of these related and other foreseeable federal actions. Importantly, this DEA does not analyze, but rather merely mentions, the predictable redirection of illegal activities into adjacent lands resulting from construction of surveillance tower arrays; nor does it properly examine the cumulative impacts of such infrastructure upon sensitive species, or the impacts due to the introduction and colonization of invasive vegetation resulting from extensive land disturbance and construction activities. Conducting a regional Environmental Impact Statement for all DHS "tactical infrastructure" is the only appropriate course of action if DHS desires to comply with NEPA.	CBP disagrees with the need for a regional Environmental Impact Statement for all DHS "tactical infrastructure." An EA is the appropriate level of inquiry for this action in accordance with the NEPA, CEQ regulations, DHS Directive 023-01, and DHS Instruction 023-01-001-01 because the action would not result in a significant impact. As this is an introductory comment, more detailed responses are provided below for comments within the body of the letter.



PC_Millis_Dan 11	<p><b>A REGIONAL ENVIRONMENTAL IMPACT STATEMENT IS REQUIRED</b></p> <p>Because the DEA fails to adequately disclose and analyze the proposed project's anticipated effects to wildlife and natural resources, and does not adequately assess reasonable alternatives and cumulative impacts from ongoing and related border security infrastructure projects, we conclude that a regional EIS that includes a lawful analysis of environmental impacts and alternatives is required. This proposed federal project warrants a much more detailed analysis than is provided in the DEA.</p> <p>Despite some thoughtful conservation measures, a "Finding of No Significant Impact" is not appropriate given the scale of the project and the ecologically and culturally sensitive areas that will be directly and indirectly impacted. In addition, there are several glaring omissions with regard to threatened and endangered species that must be addressed. These deficiencies indicate a need for a significantly more detailed analysis generally not afforded by Environmental Assessments. As such, the DEA does not adequately consider nor disclose the potential environmental impacts of the proposed actions within the Tohono O'odham IFT Tower Project area. Among other flaws, the DEA fails to adequately consider impacts on sensitive wildlife. Furthermore, the DEA has failed to consider the likely and foreseeable cumulative impacts that the proposed construction will have, especially when taken together with other proposed and constructed walls, fences, barriers, and related infrastructure along the U.S.-Mexico border in the State of Arizona, on sensitive wildlife and other natural resources in the region that are collectively a part of the ongoing and rapid DHS tactical infrastructure build-up, of which this project is a part. The arbitrary segmentation of concurrent border security infrastructure projects is in violation of NEPA.</p>	<p>CBP disagrees with the need for a regional Environmental Impact Statement for all DHS "tactical infrastructure." An EA is the appropriate level of inquiry for this action in accordance with the NEPA, CEQ regulations, DHS Directive 023-01, and DHS Instruction 023-01-001-01 because the action would not result in a significant impact. As described in Chapter 3.6 of the EA, CBP consulted with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, who concurred with CBP's determination that the project may affect, but is not likely to adversely affect the jaguar, lesser long-nosed bat, Sonoran pronghorn, and yellow-billed cuckoo. The anticipated cumulative impacts on threatened and endangered species are summarized in Chapter 4.4.5 of the EA.</p>
PC_Millis_Dan 12	<p><b>A REASONABLE RANGE OF ALTERNATIVES HAS NOT BEEN CONSIDERED</b></p> <p>NEPA requires a discussion of the "alternatives to the proposed action." 42 U.S.C. §§ 4332(C)(iii),(E). This alternatives analysis is "the heart" of the NEPA process, and is intended to provide a "clear basis for choice among options by the decision maker and the public." 40 C.F.R. 1502.14; Citizens for a Better Henderson v. Hodel, 768 F.2d 1051, 1057 (9th Cir. 1985) (EIS must consider "every" reasonable alternative). An agency's failure to consider a reasonable alternative is thus fatal to its NEPA analysis of a proposed action. See Idaho</p>	<p>The purpose and need for the project is discussed in Chapter 1.3 of the EA and was drafted in accordance with 40 C.F.R. 1502.13 and DHS Instruction 023-01-001-01. 40 C.F.R. 1505.1(e) requires that agencies consider a "range of alternatives." Per CEQ guidance, a range of alternatives includes "all reasonable alternatives." 46 Fed. Reg. 18026 (March 23, 1981). "Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable</p>

	<p>Conservation League v. Mumma, 956 F.2d 1508, 1519-20 (9th Cir. 1992) (“The existence of a viable, but unexamined alternative renders an environmental impact statement inadequate.”); Forty Most Asked Questions Concerning CEQ’s NEPA Regulations, 48 Fed. Reg. 18,026 (March 16, 1981)(“In determining the scope of alternatives to be considered, the emphasis is on what is ‘reasonable’ rather than on whether the proponent or applicant likes or is itself capable of carrying out the particular alternative. Reasonable alternatives include those that are practical or feasible from a technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.”). Rather than presenting a purpose and need statement that reflects the larger goal of improving border security, and then evaluating different means to achieve that goal, DHS in this case has defined the construction of 15 towers and the retrofit of 2 more as the goal. Because the DEA’s Alternative 3 is only a minor change in location of one particular tower site, there is not a range of viable and significantly different alternatives to compare the preferred alternative against. Thus, the DEA does not meet this requirement of NEPA. We encourage DHS to consider alternative locations of towers proposed in and adjacent to threatened and endangered designated critical habitat, roadless areas, sacred sites, culturally significant areas, known nesting sites, etc., and we ask that DHS not construct towers opposed by the Gu-Vo District until or unless local residents’ concerns are adequately addressed. We appreciate the apparent effort to locate towers on or near existing roads and impacted areas to minimize the need for new road construction. However, the purpose of this project needs to be expressed in terms of security goals to be met, rather than in terms of numbers and locations of towers to be built. Alternatives to towers should be considered.</p>	<p>from the standpoint of the applicant." Id. CBP has considered a range of alternatives in this EA. Chapter 2 of the EA describes how tower site locations were selected with the assistance of the Tohono O’odham Nation and U.S. Border Patrol. Chapter 2.4 of the EA includes additional surveillance approaches, strategies, and technologies that were considered but eliminated from consideration.</p>
PC_Millis_Dan 13	<p><b>CUMULATIVE EFFECTS HAVE NOT BEEN SUFFICIENTLY ANALYZED</b>  Despite an effort to catalog various DHS and other foreseeable agency projects in the project area, the DEA falls short of analyzing the cumulative effects of these projects. In other words, the laundry list of projects catalogued does not provide the project proponent or the public with enough information to understand how these projects have additive, synergistic and cumulative impacts upon the human environment and the sensitive ecology of the Sonoran Desert where the project is proposed. For instance, how are surveillance towers, in conjunction with hundreds of miles of newly constructed walls and</p>	<p>CBP has sufficiently described the impacts of the action in the EA, including the direct, indirect, and cumulative effects of the action. The EA states that Alternatives 2 and 3 would enhance USBP’s detection and threat classification capabilities and thus, improve operational efficiency within the area of tower coverage. Over time, it is anticipated that these enhanced capabilities would increase the deterrence of cross-border violator activity within the area of tower coverage, which could have beneficial impacts on the environment. CBP disagrees with the need for a regional Environmental</p>

	<p>vehicle barriers anticipated to impact illegal activities, habitat suitability and cross-border habitat connectivity, etc.? How are surveillance towers, and the information they gain, anticipated to impact the location, frequency and duration of enforcement activities in the surrounding areas? For instance, if the location of towers pushes traffic deeper into mountain and canyon country, this indirect impact will be almost immediate and have severe consequences for ecologically sensitive areas. On the other hand, if surveillance towers and enforcement activities effectively act as deterrents to illegal entry, it is possible some of these impacts could be beneficial not only for security, but to wildlife habitat. However, without an analysis of what can be reasonably anticipated, project proponents are left without sufficient information to inform their decisions. NEPA requires federal agencies proposing to undertake comprehensive actions for development of a region, or proposing to undertake a series of related actions within a region that will have cumulative and synergistic impacts on the environment, to consider and disclose the environmental impacts of such actions in a comprehensive EIS. If DHS fails to prepare a comprehensive EIS that analyzes and discloses the individual, cumulative and synergistic impacts of these interrelated projects, it will be in violation of NEPA.</p>	<p>Impact Statement for this project. An EA is the appropriate level of inquiry for this action in accordance with the NEPA, CEQ regulations, DHS Directive 023-01, and DHS Instruction 023-01-001-01 because the action would not result in a significant impact.</p>
PC_Millis_Dan 14	<p><b>ANALYSIS OF POTENTIAL IMPACTS TO THREATENED AND ENDANGERED SPECIES AND CRITICAL HABITAT IS INADEQUATE</b></p> <p>Despite the importance of the large project area to a diversity of plants and other organisms, the DEA's analysis of potential impacts to them by construction of the proposed surveillance towers and supporting infrastructure is insufficient. This is in part because DHS has chosen to conduct a lesser Environmental Assessment instead of beginning with a more thorough Environmental Impact Statement. This is especially apparent with respect to the DEA's analysis of impacts on special status species, including species listed as threatened or endangered pursuant to the Endangered Species Act ("ESA").</p> <p>By its nature, the impact of the proposed project will extend well beyond the confines of the footprint of the surveillance towers and supporting access infrastructure. First, the predictable re-direction of illegal activities away from the towers is discussed, but not analyzed. Second, an increase of enforcement activities within the visible range of the surveillance towers in response</p>	<p>The EA fully assesses the foreseeable direct, indirect, and cumulative impacts of the alternatives. As described in Chapter 3.6 of the EA, CBP consulted with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, who concurred with CBP's determination that the project may affect, but is not likely to adversely affect the jaguar, lesser long-nosed bat, Sonoran pronghorn, and yellow-billed cuckoo. The anticipated cumulative impacts on threatened and endangered species are summarized in Chapter 4.4.5 of the EA. CBP disagrees with the need for an Environmental Impact Statement for this project. An environmental assessment is the appropriate level of inquiry for this action in accordance with the NEPA, CEQ regulations, DHS Directive 023-01, and DHS Instruction 023-01-001-01 because the action would not result in a significant impact.</p>

	<p>to the real-time information they obtain is discussed, but not analyzed. Third, the long-term impacts and disturbance from of noise, lights, maintenance, and interdiction activities upon wildlife and habitat quality briefly discussed, but not analyzed. The fact that all of these impacts have been noted in the DEA, but not analyzed so as to provide the project proponent or the public sufficient quantitative information regarding the nature and severity of such impacts, is further evidence that the DEA is insufficient and should have triggered and Environmental Impact Statement to be conducted. Expediency simply cannot be equated with compliance</p>	
PC_Millis_Dan 15	<p>Threatened, Endangered and Imperiled Species:  Cactus ferruginous pygmy-owl  The Cactus ferruginous pygmy-owl (pygmy owl) (<i>Glaucidium ridgwayi cactorum</i> - proposed reclassification) is an imperiled species found and observed in the project area. This species was listed as an endangered species in 1997 and was delisted in 2006. The decision to delist the pygmy-owl has been appealed to the Ninth Circuit Court of Appeals and is currently pending. The pygmy-owl was not delisted because it had been “recovered”, but rather based upon legal technicalities. Since being delisted, this species has continued to decline throughout its range due to prolonged drought (Flesch 2008), development of its habitat, and numerous other threats. Concurrent with pending legal challenges to the delisting, the pygmy-owl has been petitioned for relisting based upon new taxonomic information (Proudfoot et al. 2006), classifying the pygmy-owl occurring in the project area as <i>Glaucidium ridgwayi cactorum</i>, as well as new threats such as border security infrastructure that has been constructed since delisting. There is a strong likelihood this species will be relisted as an endangered species. This decision may even be made prior to construction beginning on the proposed project. Therefore, we urge DHS to assess the potential impact of proposed tower and infrastructure development, maintenance and associated interdiction activities upon this imperiled species in conjunction with the USFWS and the AZGFD.</p> <p>Research conducted on the Organ Pipe Cactus National Monument (OPCNM) illustrates the disruptive effects of border related activities to pygmy-owls at numerous occupied sites at OPCNM (Snyder 2005, Table 1). Snyder (2005) states that the most notable issue at OPCNM “is the increasing drug smuggling, illegal The potential for the proposed project, including ongoing maintenance, to impact this</p>	<p>The cactus ferruginous pygmy owl is not protected by the ESA, nor is it currently a proposed or candidate species for ESA listing. The species is protected under the Migratory Bird Treaty Act. CBP conducted biological surveys that identified potential cactus ferruginous pygmy owl habitat within the project area. CBP has developed best management practices in collaboration with the Tohono O’odham Nation Wildlife and Vegetation Management Program that would avoid or minimize impacts to migratory birds and culturally sensitive species. This includes requiring protocol surveys for the pygmy owl. These best management practices are summarized in Section 5.0.</p>

	<p>species and their habitat long-term is a strong likelihood, and as such should not be omitted from the DEA or EIS. Surveys for pygmy-owls should be conducted in the vicinity prior to any construction activities commencing. (Please see discussion under Lesser long-nosed bat section for potential radio frequency and electromagnetic radiation impacts to birds.)</p>	
PC_Millis_Dan 16	<p>Lesser long-nosed bat  Two of the proposed towers (TCA-AJO-0460 and TCA-AJO-0458) are located within known roost site perimeters of the lesser long-nosed bat. The potential impact of towers for strikes and of radar and electromagnetic frequencies emitted by surveillance and communications towers upon bats and avifauna is not sufficiently analyzed in the DEA. The potential impact of bird strikes on communication towers and other vertical obstructions is well established in the scientific literature.  Animals, such as migratory birds, bats, and certain fish and insects that are strongly dependent on magnetic fields for orientation or migration are likely to be disproportionately impacted by electromagnetic field (EMF) radiation. (Nichols and Racey 2007) demonstrated that bat activity is reduced in habitats exposed to electromagnetic radiation when compared with matched sites where no such radiation can be detected: "Bat activity was significantly reduced in habitats exposed to an EMF strength of greater than 2 v/m when compared to matched sites registering EMF levels of zero. The reduction in bat activity was not significantly different at lower levels of EMF strength within 400 m of the radar." Certain electromagnetic frequencies have been documented to irritate bat's nervous systems, interfere with communicating and flying – such applications are being considered for applications to deter bats away from areas where conflicts with aviation and wind turbines exist (Nichols and Racey 2007) and have also been used in "pest control" applications. It is clear that the best available science was not thoroughly investigated with regard to this impact in the DEA.  The DEA must analyze the potential impacts given the context of the proposed equipment, site locations, species, etc. The following are a few examples:  "Interaction of electromagnetic fields and living systems with special reference to birds" (Bigu 1973). In this study, the mortality rate of the radiated colony was almost double that of the control colony.  "Effects of microwave radiation on Parakeets in Flight" (Tanner 1969). The results obtained in this experiment indicates that microwave</p>	<p>Based on the best available science, CBP has determined, with the assistance of the Tohono O'odham Nation Wildlife and Vegetation Management Program, and USFWS has concurred that the proposed action may affect, but is not likely to adversely affect, the lesser long-nosed bat. CBP has been performing studies on the impact electromagnetic radiation could have on lesser long-nosed bats since 2010 in accordance with the biological opinions for SBI-net AJO-1 (AESO/SE: 22410-F-2009-0089 and 22410-1989-0078-R6) and Tucson West (AESO/SE22410-2008-F-0373). The Final EA includes more background information on the impacts from electromagnetic radiation on both wildlife and humans. The Draft EA (March 2016) did not quantify the safe operating distance for the equipment at 17 feet. More information regarding the equipment that could be used on the towers has been added.</p>

	<p>radiation has an aversive effect on birds in flight comparable to that previously observed in caged birds.</p> <p>“Thermal Effects of Short Radio Waves on Migrating Birds” (Kleinhaus et al. 1995). This study concluded that large birds landing on antenna structures might become vulnerable to overheating, but it is likely that these birds would depart rather than remain where they are uncomfortably hot.</p> <p>One of the few scientific review articles published on the environmental impacts of electromagnetic frequencies is “Health and safety implications of exposure to electromagnetic fields in the frequency range 300 Hz to 10 MHz. (Litvak, Foster and Repacholi 2002). Much information in the gray literature, specifically in other Environmental Assessments and Environmental Impact Statements for communication towers and other vertical obstructions such as wind turbines, are not sufficiently referenced in the DEA. The DEA is sorely insufficient with regard to assessing the impacts of communication and surveillance towers, emitting various EMF frequencies, most of which are proposed to be located in sensitive wildland environments. Most importantly, the DEA fails to include any information regarding the EMF or RF energy strength of the proposed tower’s equipment, which is a key determinant in assessing the level and proximity within which the environment will be impacted for sensitive species.</p> <p>There is one reference to a “safe operating distance for these systems (i.e., 17 feet)”, but the basis for this is distance is not quantified, nor substantiated. While humans and terrestrial animals will likely stay out of this proximity due to fences and the height of equipment, both birds and bats will almost certainly come within 17 feet of tower equipment on a regular basis. Given that such little research has been done to quantify impacts of such invisible emissions upon birds and bats, and the one and only attempt to substantiate the above claim of insignificance is based upon a workshop presentation given nearly a decade ago “(Beason 1999 -not a peer reviewed journal article), the statement that the proposed towers would not result in significant adverse impacts to the biological environment is baseless. This “invisible” potential impact merits further scientific study, which should be funded by DHS and cooperating agencies via mitigation money, and highlights the importance of locating towers well away from known avian nests, flyways, bat roosts and foraging areas.</p>	
PC_Millis_Dan 17	Surveillance infrastructure comes with its own set of potential impacts, both direct and indirect, which must be properly assessed and mitigated	CBP has sufficiently described the impacts of the action in the EA, including the direct, indirect, and cumulative

	<p>for. We continue to see the potential for remote surveillance towers to capture information identifying wildlife of conservation concern. This potential benefit to science and wildlife conservation was not addressed in the DEA. We hope that if detected, such information will be shared with wildlife management agencies, researchers and concerned non-governmental organizations. Such information is valuable in building our collective understanding of the occurrence, distribution and movements of wildlife in the remote borderlands region.</p>	<p>effects of the action. CBP has historically shared data with wildlife agencies of wildlife detections; however, since this project occurs on the Tohono O'odham Nation, sharing data with outside entities has and would likely continue to be subject to the approval of the Tohono O'odham Nation.</p>
PC_Mulherin_Mary_Jean	<p>I am appalled that the US government would move forward with this given the fact the people whose lands you would propose to build on have categorically refused this effort on your part. This is called "white supremacy" and as a citizen I am very concerned with the direction our country is moving in. I will alert my Senators to my concerns.</p>	<p>Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p>
PC_Ragan_Peter 1	<p>These comments are regarding the Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation. Placing these towers on the Nation will in fact have a significant negative impact. The EA states that the tower footprints will directly impact 8.23 acres of previously undisturbed land and the improvement of approach roads will permanently impact up to 214.2 acres of previously undisturbed land. Just because there are no historic designations on the land does not mean they are not historic- the entire Nation is a historic site, not only to the people who live there but to all of us, whether we recognize it or not. Is it really reasonable to assert that no significant impact will result to sacred and ceremonial places, to burial grounds and ancient cultural sites from disturbing 225 or more acres of undisturbed land in a place where the inhabitants and their ancestors have lived for thousands of years? Tohono O'odham people have told me that one tower site is at a burial ground and another is at a traditional saguaro fruit gathering place. A finding of no significant impact is oblivious to the cultural traditions of the entire Nation.</p>	<p>Thank you for your participation in the NEPA process. Your comment has been broken down into component parts to ensure that all comments provided in your email are addressed.</p> <p>As described in Chapter 3.12 of the EA, CBP contract archaeologists have performed pedestrian surveys of all proposed disturbance areas. The contract archaeologists did not identify any burial grounds within the disturbance area of any tower site. CBP completed consultation with the Tohono O'odham Nation Tribal Historic Preservation Office under Section 106 of the National Historic Preservation Act and received their concurrence that the proposed action would not adversely affect historic or cultural resources. CBP would implement, to the maximum extent practicable, best management practices in order to avoid adversely affecting cultural resources. A summary of the best management practices is available in Chapter 5.5 of the EA.</p> <p>A finding of no significant impact is the appropriate</p>

		determination for this action under NEPA, CEQ Regulations, and DHS Directive 023-01 and Instruction 023-01-001-01.
PC_Ragan_Peter 2	The Draft EA says that the proposed action "may affect but is not likely to adversely affect" federally listed species. Listed species such as the sonoran[sic] pronghorn and the jaguar and lesser long nosed bat are struggling to survive in the area. How many more invasive actions that "may affect" them can they take? An accounting of cumulative impacts and future related impacts is needed but absent.	As described in Chapter 3.6 of the EA, CBP consulted with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, who concurred with CBP's determination that the project may affect, but is not likely to adversely affect the jaguar, lesser long-nosed bat, Sonoran pronghorn, and yellow-billed cuckoo. The anticipated cumulative impacts on threatened and endangered species are discussed in Chapter 4.4.5 of the EA.
PC_Ragan_Peter 3	The Draft EA says that the current knowledge of microwave emissions result in an expectation of minor impacts to wildlife. Is there current knowledge of the impacts of large areas of overlapping microwave emissions on struggling native bee populations and bat populations? Current knowledge is inadequate.	Chapter 3.5 of the EA includes a discussion on how microwave emissions may potentially impact wildlife. CBP used the best available science in preparing this assessment and additional information has been provided in the Final EA. CBP is unaware of a regional study on how large areas of overlapping microwave emissions may affect native bees. According to the U.S. Department of Agriculture, "Despite a great deal of attention having been paid to the idea, neither cell phones nor cell phone towers have been shown to have any connection to [colony collapse disorder] or poor honey bee health." USDA, <i>ARS Honey Bee Health and Colony Collapse Disorder</i> , <a href="https://www.ars.usda.gov/News/docs.htm?docid=15572">https://www.ars.usda.gov/News/docs.htm?docid=15572</a> . CBP revised Section 3.5 accordingly. As described in Chapter 3.6 of the EA, CBP has been performing studies on the impact surveillance towers could have on lesser long-nosed bats since 2010 in accordance with the biological opinions for SBInet AJO-1 (AESO/SE: 22410-F-2009-0089 and 22410-1989-0078-R6) and Tucson West (AESO/SE22410-2008-F-0373).
PC_Ragan_Peter 4	The people of the Gu-Vo District of the Tohono O'odham Nation have taken the position of no IFTs whatsoever. Their authority in their own Nation should be respected. The rights of the O'odham people to protect and preserve their heritage and their land for themselves and future generations should be respected. These towers should not be placed on the Tohono O'odham Nation.	Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and



		Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.
PC_Rexroad_Carly	<p>I am writing to urge you NOT to place towers on Tohono O'odham nation. You must respect the will of the Tohono O'odham nation to not have these towers on their land. Respect the Gu-Vo District position of "NO IFTs whatsoever."</p> <p>Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places. Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.</p>	<p>Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p>
PC_Rexroad_Kelly	<p>I am writing to urge you NOT to place towers on Tohono O'odham nation. You must respect the will of the Tohono O'odham nation to not have these towers on their land. Respect the Gu-Vo District position of "NO IFTs whatsoever."</p> <p>Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places. Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.</p>	<p>Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p>
PC_Reynolds_Jason	<p>I am commenting on the proposed "Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation." I have camped and traveled along many of the 8000 miles of "administrative roads" along the border in Southern Arizona and I think these towers are a solution looking for a problem. The environmental damage done by the US Border Patrol rivals the damage done to the civil &amp; human rights violations that have become the American over reaction to the terrorism threats and illegal immigration. We are trending rapidly towards fascism, just like Israel. Stop now before it is too late.</p>	<p>Thank you for your participation in the NEPA process. CBP would implement, to the maximum extent practicable, best management practices in order to avoid or minimize environmental impacts. The purpose and need for the proposed action can be found in Chapter 1.2 of the EA.</p>
PC_Roberts_Sarah 1	<p>I am writing to you regarding the Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation. The towers will destroy Tohono O'odham land by creating many new roads across the districts, as well as allow access to and destroy native sacred sites. Roads built for BP use currently are known to destroy the Sonoran desert.</p>	<p>Thank you for your participation in the NEPA process. Your comment has been broken down into component parts to ensure that all comments provided in your email are addressed.</p> <p>The proposed project includes the construction of 14 new access roads (up to 0.24 miles total). All other roadwork would be improving existing roads, including</p>

		the Traditional Northern Road (a.k.a. "The Border Road"). As described in Chapter 3.12, CBP completed consultation with the Tohono O'odham Nation Tribal Historic Preservation Office under Section 106 of the NHPA and received their concurrence that the project would not adversely affect any cultural or historic resources. CBP would implement, to the maximum extent practicable, best management practices in order to avoid adversely affecting cultural or historic resources. These best management practices were prepared with the assistance and guidance of the Tohono O'odham Nation Tribal Historic Preservation Office. A summary of the best management practices for cultural resources for this project are available in Chapter 5.5 of the EA.
PC_Roberts_Sarah 2	The towers are to be built by ELBIT Systems, an Israeli company responsible for surveillance and oppression of Palestinian communities. The responsible approach would be to boycott Israeli companies, not invite them to destroy native people's sacred land.	This portion of the comment does not contain a specific question or inquiry related to the EA; therefore, no response is provided.
PC_Sanchez_Margarita	<p>... NO ITFs !!! ... NO ITFs WHATSOEVER !!! ... RESPECT O'ODHAM MEMBERS !!!</p> <ol style="list-style-type: none"> <li>1. Support and acknowledge the Gu-Vo District as O'odham Authority, voice of O'odham Community and Community Members.</li> <li>2. Support and respect Gu-Vo District's actions to protect and preserve Sacred Places, and Buriel Place, and Ancient Village Places.</li> <li>3. Support and respect Gu-Vo District's efforts to protect Future Generations.</li> <li>4. Support and respect Gu-Vo District's position of "No IFTs whatsoever".</li> </ol>	Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation (including the Gu-Vo District) assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.
PC_Schivone_Gabriel	As an Arizona native I urge you NOT to build or otherwise place IFTs on O'odham lands. The Gu-District as legitimate and representative community voices oppose IFT placement due to ancestral locations of burial, ceremony and communities, please respect that as well as their voices and wishes to preserve future generations' welfare.	Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5,

		<p>the project would not occur without the consent of the Tohono O'odham Nation.</p> <p>As described in Chapter 3.12, CBP completed consultation with the Tohono O'odham Nation Tribal Historic Preservation Office under Section 106 of the NHPA and received their concurrence that the project would not adversely affect any cultural or historic resources. CBP would implement, to the maximum extent practicable, best management practices in order to avoid adversely affecting cultural or historic resources.</p>
PC_Schnare_Douglas	<p>You should work with the tohono o'oadham[sic] nation. They have many burial grounds and sacred sites on their land which should be respected. Your work is important to the country but it must be done with minimum impact on the TO nation. How does it effect the people of the nation, both young and old?</p>	<p>Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation. CBP would implement, to the maximum extent practicable, best management practices in order to avoid adversely affecting cultural resources. A summary of the best management practices for cultural resources is available in Chapter 5.5 of the EA. As described in Table 3-1, a detailed statement on the sociological impacts of the project is not needed for this action.</p>
PC_Smith_Sophie 1	<p>I am writing in support of "Alternative 1" for the proposal to build IFT towers on the Tohono O'odham Nation. As traditional tribal lands with many sacred sites, including unmarked burial sites, it is clear that the construction of these towers will cause significant desecration and, in turn, represent a serious violation of tribal sovereignty.</p>	<p>Thank you for your participation in the NEPA process. Your comment has been broken down into component parts to ensure that all comments provided in your email are addressed.</p> <p>Alternative 1 (No Action Alternative) does not meet the purpose and need for the proposed action. In addition, as described in Chapter 3.12, CBP completed consultation with the Tohono O'odham Nation Tribal Historic Preservation Office under Section 106 of the NHPA and received their concurrence that the project</p>

		would not adversely affect any cultural or historic resources. CBP would implement, to the maximum extent practicable, best management practices in order to avoid adversely affecting cultural resources. These best management practices were prepared with the assistance and guidance of the Tohono O'odham Nation Tribal Historic Preservation Office. A summary of the best management practices for cultural resources for this project are available in Chapter 5.5 of the EA.
PC_Smith_Sophie 2	In addition, the construction of new roads in these remote wilderness roadless areas will cause serious harm to the desert ecosystems that have thrived on the nation for thousands of years.	CBP conducted field surveys of the entire project area. As described in Table 3.1, no unique and sensitive areas (e.g. wilderness areas or wilderness study areas) were identified with the project area. As described in Chapter 2.2.4, the proposed project includes constructing 14 new access roads, totaling 0.024 miles. All other roadwork would be improving existing roads, including the Traditional Northern Road (a.k.a. "The Border Road"), to allow for safe passage for construction and maintenance vehicles.
PC_Smith_Sophie 3	Many of these regions are used for traditional practices, such as saguaro fruit harvesting--practices that will be altered or disabled by the presence of permanent surveillance infrastructure and border enforcement personnel in these territories.	Although no activities are proposed to occur within a known traditional saguaro fruit harvesting area, CBP has revised Chapter 5.5 in the Final EA to include a best management practice, which would avoid interfering with traditional saguaro fruit harvesting areas.
PC_Smith_Sophie 4	Furthermore, I believe that there has not been adequate research conducted to demonstrate that the radiation/waves emitted by these long-range surveillance towers do not disrupt bird and insect migration patterns in these vital corridors--migrations that significantly effect the ability for the O'odham people to live off of the land and for the maintenance of precious biodiversity in the region.	CBP has used the best available science in preparing the EA and does not disagree with the need for additional research on electromagnetic radiation impacts, particularly on the avian brain, but no additional research is required for this EA. Please see Chapter 3.5.2 for more information.
PC_Todd_Dan	I write to oppose the construction of the proposed Integrated Fixed Towers on the Tohono O'odham Nation. Seven of these towers would be in the district of Gu-Vo (Big Pond), the westernmost district of the Tohono O'odham Nation. The Gu-Vo Governing Council said No to the proposed construction of these Integrated Fixed Towers (IFT) in the Gu-Vo District. Accordingly, I urge you to · Respect the Gu-Vo District position of NO IFTs whatsoever. · Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient	Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation (including the Gu-Vo District) assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.

	<p>village places.</p> <ul style="list-style-type: none"> <li>· Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.</li> <li>· Respect the Gu-Vo District's efforts to protect future generations.</li> </ul> <p>As a long-time resident of the Sonoran Desert, I believe such intrusive constructions serve no constructive purpose whatsoever and have no place here, in addition to the more important opposition of people who have lived here for thousands of years</p>	
PC_Wickland_Timothy	<p>I am writing to encourage you to reject construction of Integrated Fixed Towers (IFT) in the Gu-Vo District. Please:</p> <ul style="list-style-type: none"> <li>· Respect the Gu-Vo District position of NO IFTs whatsoever.</li> <li>· Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places.</li> <li>· Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.</li> <li>· Respect the Gu-Vo District's efforts to protect future generations.</li> </ul> <p>I urge you to not allow construction of any Integrated Fixed Towers.</p>	<p>Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation (including the Gu-Vo District) assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p>
PC_Williams_Randy	<p>Respect the Gu-Vo District position of NO IFTs whatsoever.</p> <p>Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places.</p> <p>Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.</p> <p>Respect the Gu-Vo District's efforts to protect future generations.</p>	<p>Thank you for your participation in the NEPA process. As described in Chapters 1.4 and 2.2.5 of the EA, the Tohono O'odham Nation is a cooperating agency in this effort (40 C.F.R. Parts 1501.6 and 1508.5). Among other things, the Tohono O'odham Nation (including the Gu-Vo District) assisted with the preparation of this EA and the selection of tower site locations as described in Chapters 1.4 and 2.0 and Appendix A. In addition, as described in Chapter 2.2.5, the project would not occur without the consent of the Tohono O'odham Nation.</p>

**AGENCY CORRESPONDENCE**



U.S. Customs and  
Border Protection

May 23, 2013

Honorable Ned Norris, Jr., Chairman  
Tohono O'odham Nation  
Main Street  
Building #9  
Sells, AZ 85634

Dear Chairman Norris:

The Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP), Office of Technology Innovation and Acquisition (OTIA) would like to invite the Tohono O'odham Nation to be a cooperating agency for the development of an environmental assessment (EA) for the proposed Integrated Fixed Towers (IFT) within the Chukut Kuk and Gu-Vo Districts of the Tohono O'odham Nation. CBP has also contacted the Bureau of Indian Affairs, Papago Agency to request their participation as a cooperating agency for this undertaking.

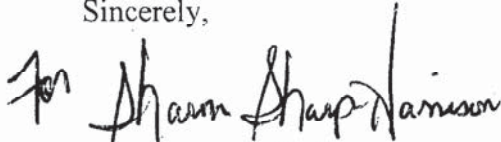
On May 9, 2013, the Tohono O'odham Legislative Council passed Resolution #13-142 *Authorizing the U.S. Customs and Border Protection to Conduct Environmental Assessments, and Conduct Pre-Development Activities for the Proposed Integrated Fixed Tower Program in Accordance with the Laws of the Nation and the United States.*

CBP will prepare the National Environmental Policy Act (NEPA) document to adequately identify resource impacts and any potential mitigation to ensure resource protection where necessary. CBP is ultimately responsible for assuring compliance with the requirements of NEPA, the Endangered Species Act of 1973 as amended, the National Historic Preservation Act of 1966 as amended, and the Archeological and Historical Preservation Act of 1974.

As a cooperating agency, we are requesting the Tohono O'odham Nation cooperate and provide input, review, and comments in the development of the EA to ensure the document meets the needs of the Tohono O'odham Nation. As the lead Federal agency for this undertaking, CBP will solely be responsible for signing and distributing the final EA and Finding of No Significant Impact (FONSI).

Should you have any additional questions or concerns about this project please contact Ms. Sharon Sharp-Harrison at (571) 468-7174 or email at [sharon.l.sharp-harrison@cbp.dhs.gov](mailto:sharon.l.sharp-harrison@cbp.dhs.gov) at your earliest convenience. We look forward to working with you on this project.

Sincerely,



Mary D. Hassell, CEP  
Environmental and Real Estate  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition  
1901 S. Bell Street, Suite 700  
Alexandria, VA 20598

Cc: Peter Steere, THPO  
Karen Howe, Natural Resources  
Christopher Brooks, Water Resources  
David Jacome, Realty Office  
Augustine Toro, Director, Natural Resources  
Frances Conde, Chair, Legislative Cultural Preservation Committee  
Lorraine Eiler, Chair, Legislative Natural Resources Committee

**Enclosure:** Figure 1. IFT Proposed Tower Locations



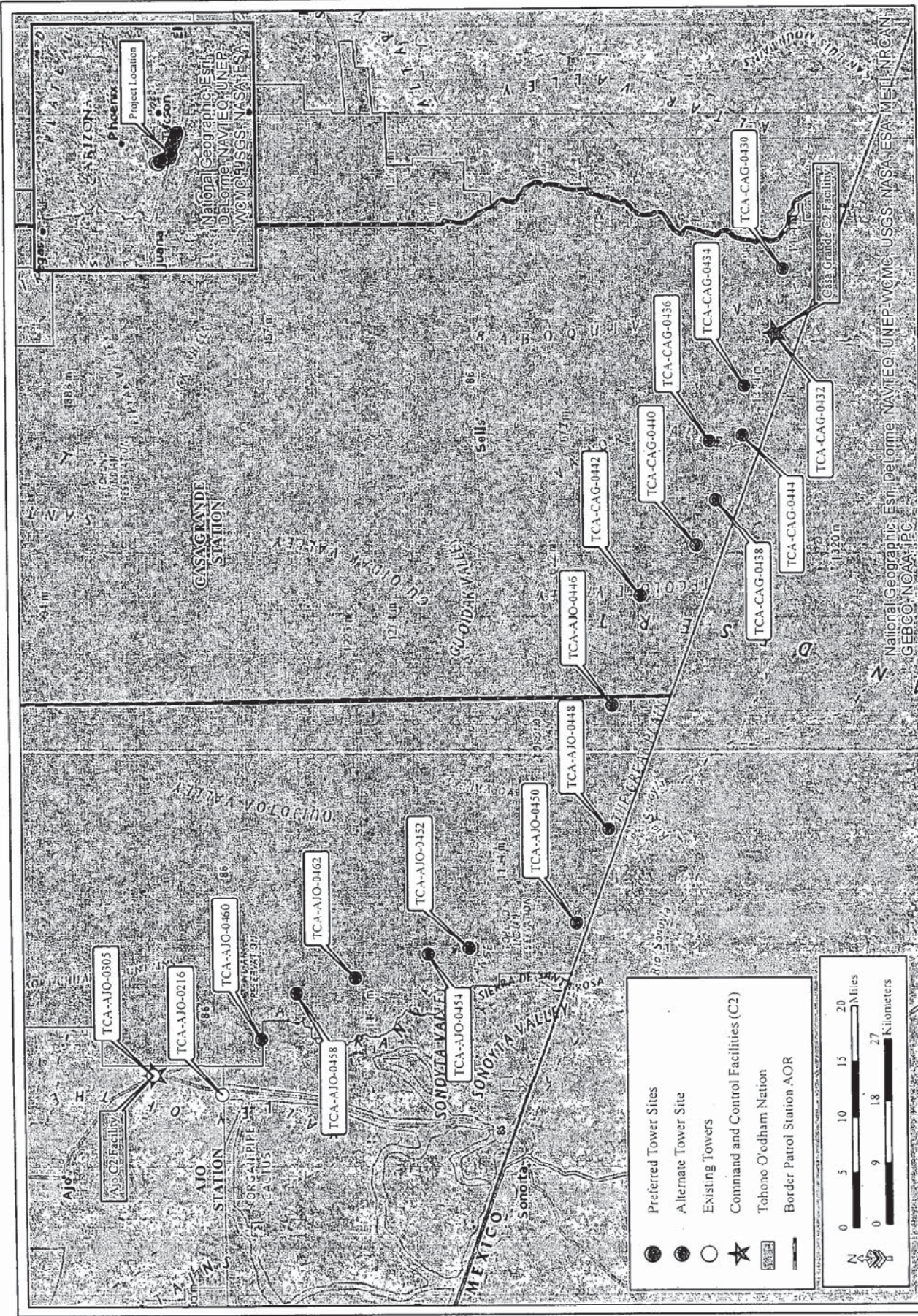


Figure 1. IFT Proposed Tower Locations - Ajo and Casa Grande Stations



U.S. Customs and  
Border Protection

May 28, 2013

Ms. Amy Heuslein, Western Region Environmental Protection Officer  
Bureau of Indian Affairs  
2600 N. Central Avenue  
4<sup>th</sup> Floor Mailroom  
Phoenix, AZ 85004-3050

Dear Ms. Heuslein:

The Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP), Office of Technology Innovation and Acquisition (OTIA) would like to invite the Bureau of Indian Affairs (BIA) to be a cooperating agency for the development of an environmental assessment (EA) for the proposed Integrated Fixed Towers (IFT) within the Chukut Kuk and Gu-Vo Districts of the Tohono O'odham Nation. CBP has also contacted the Tohono O'odham Nation and the BIA Papago Agency to request their participation as cooperating agencies for this undertaking.

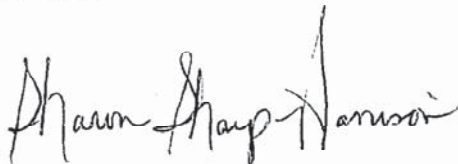
On May 9, 2013 the Tohono O'odham Legislative Council passed Resolution #13-142, *Authorizing the U.S. Customs and Border Protection to Conduct Environmental Assessments, and Conduct Pre-Development Activities for the Proposed Integrated Fixed Tower Program in Accordance with the Laws of the Nation and the United States.*

CBP will prepare a National Environmental Policy Act (NEPA) document to adequately identify resource impacts and any potential mitigation to ensure resource protection where necessary. CBP is ultimately responsible for assuring compliance with the requirements of NEPA, the Endangered Species Acts of 1973 as amended, the National Historic Preservation Act of 1966 as amended, and the Archeological and Historical Preservation Act of 1974.

As a cooperating agency, we are requesting the BIA cooperate and provide input, review, and comments in the development of the Environmental Assessment (EA) to ensure the document meets the needs of the BIA. As the lead Federal agency for this undertaking, CBP will solely be responsible for signing and distributing the final EA and Finding of No Significant Impact (FONSI).

Should you have any additional questions or concerns about this project please contact Ms. Sharon Sharp-Harrison at (571) 468-7174 or email at [sharon.l.sharp-harrison@cbp.dhs.gov](mailto:sharon.l.sharp-harrison@cbp.dhs.gov) at your earliest convenience. We look forward to working with you on this project.

Sincerely,

for 

Mary D. Hassell, CEP  
Environment and Real Estate  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition  
1901 S. Bell Street, Suite 700  
Alexandria, VA 20598

**Enclosure:** Figure 1. Proposed IFT Tower Locations

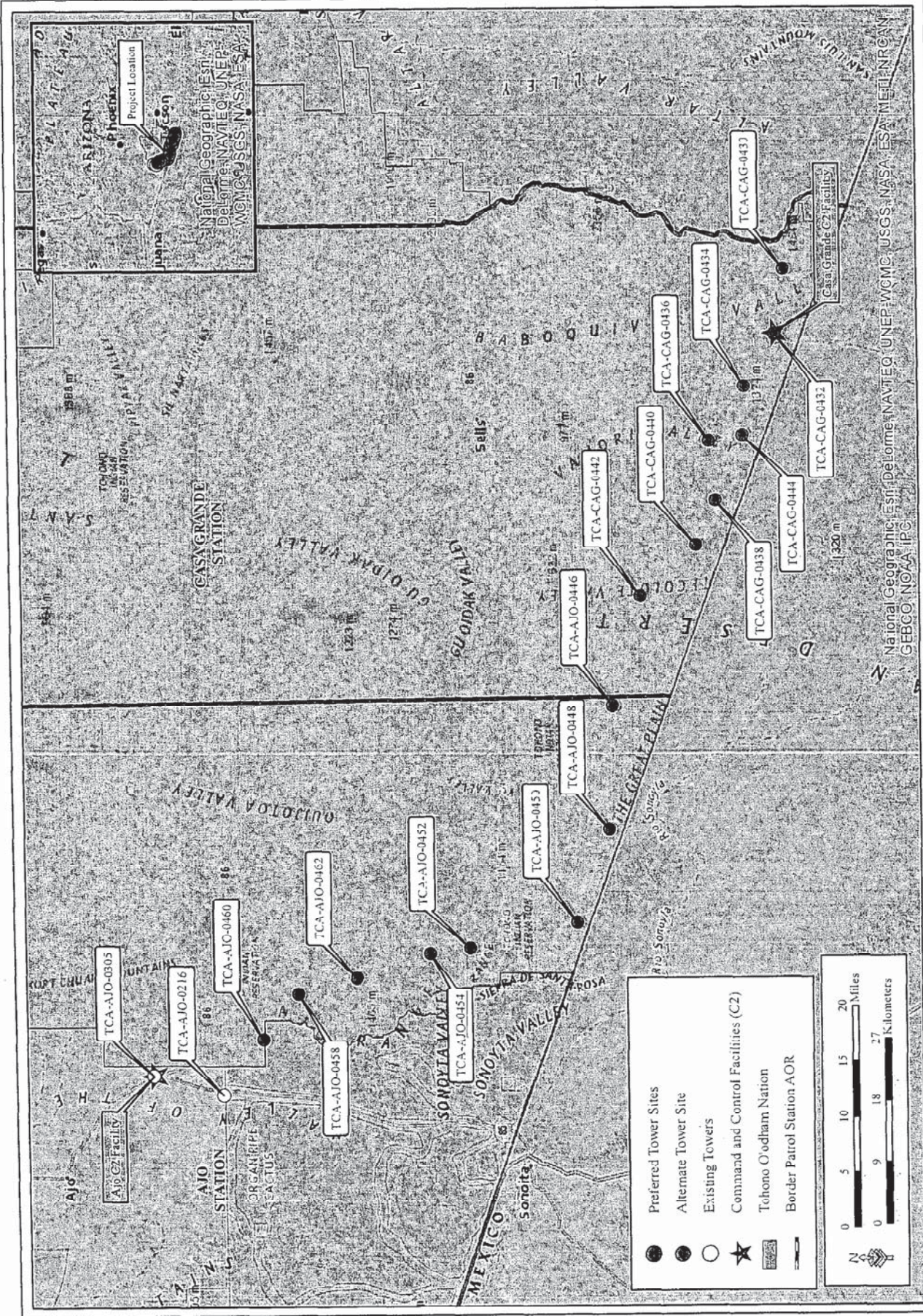


Figure 1. IFT Proposed Tower Locations - Ajo and Casa Grande Stations



**U.S. Customs and  
Border Protection**

May 28, 2013

Ms. Nina Siquieros, Superintendent  
Papago Agency, Bureau of Indian Affairs  
P.O. Box 490  
Sells, AZ 85634

Dear Ms. Siquieros:

The Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP), Office of Technology Innovation and Acquisition (OTIA) would like to invite the Bureau of Indian Affairs (BIA), Papago Agency to be a cooperating agency for the development of an environmental assessment (EA) for the proposed Integrated Fixed Towers (IFT) within the Chukut Kuk and Gu-Vo District of the Tohono O'odham Nation. CBP has also contacted the Tohono O'odham Nation and the BIA Western Regional Office to request their participation as cooperating agencies for this undertaking.

On May 9, 2013 the Tohono O'odham Legislative Council passed Resolution #13-142, *Authorizing the U.S. Customs and Border Protection to Conduct Environmental Assessments, and Conduct Pre-Development Activities for the Proposed Integrated Fixed Tower Program in Accordance with the Laws of the Nation and the United States.*

CBP will prepare a National Environmental Policy Act (NEPA) document to adequately identify resource impacts and any potential mitigation to ensure resource protection where necessary. CBP is ultimately responsible for assuring compliance with the requirements of NEPA, the Endangered Species Acts of 1973 as amended, the National Historic Preservation Act of 1966 as amended, and the Archeological and Historical Preservation Act of 1974.

As a cooperating agency, we are requesting the Papago Agency cooperate and provide input, review, and comments in the development of the Environmental Assessment (EA) to ensure the document meets the needs of the Papago Agency and the BIA. As the lead Federal agency for this undertaking, CBP will solely be responsible for signing and distributing the final EA and Finding of No Significant Impact (FONSI).

Should you have any additional questions or concerns about this project please contact Ms. Sharon Sharp-Harrison at (571) 468-7174 or email at [sharon.l.sharp-harrison@cbp.dhs.gov](mailto:sharon.l.sharp-harrison@cbp.dhs.gov) at your earliest convenience. We look forward to working with you on this project.

Sincerely,

*for Sharon Sharp-Harrison*

Mary D. Hassell, CEP  
Environment and Real Estate  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition  
1901 S. Bell Street, Suite 700  
Alexandria, VA 20598

**Enclosure:** Figure 1. Proposed IFT Tower Locations

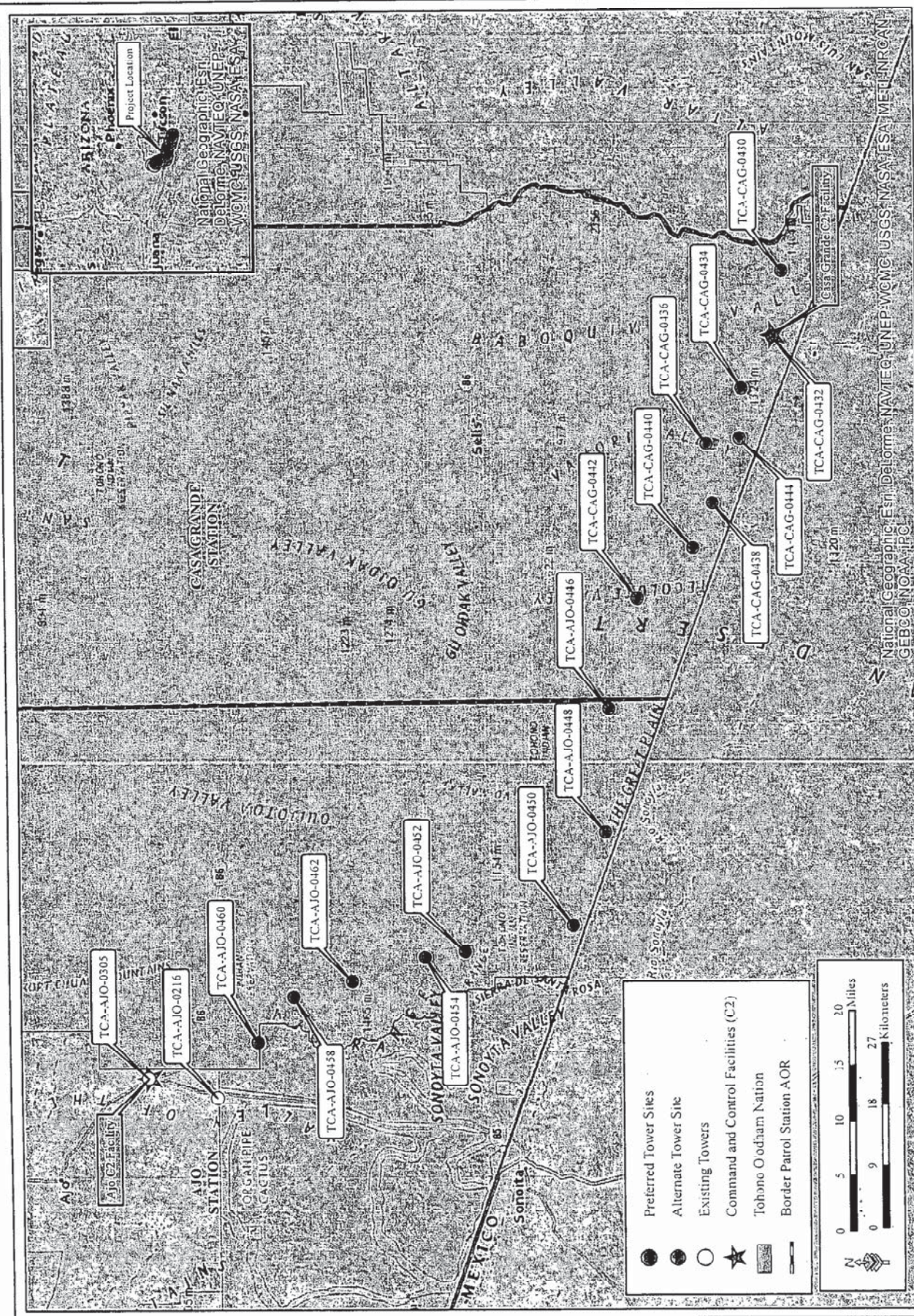


Figure 1. IFT Proposed Tower Locations - Ajo and Casa Grande Stations

## TON IFT EA Agency Coordination Letters

1. Bureau of Indian Affairs  
Ms. Amy Heuslein, Western Region Environmental Protection Officer  
2600 N. Central Avenue  
4<sup>th</sup> Floor Mailroom  
Phoenix, AZ 85004-3050
  
2. Bureau of Indian Affairs  
Ms. Nina Siqueiros, Superintendent  
Papago Agency  
P.O. Box 490  
Sells, AZ 85634  
(520) 383-3286
  
3. Tohono O'odham Nation  
Honorable Ned Norris  
Main Street  
Building #49  
Sells, AZ 85634
  
- Cc: Peter Steere, THPO  
Karen Howe, Natural Resources  
Christopher Brooks, Water Resources  
Gerald Fayuant, Director, Realty Office  
Augustine Toro, Director, Natural Resources  
Frances Conde, Chair, Legislative Cultural Preservation Committee  
Lorraine Eiler, Chair, Legislative Natural Resources Committee  
Ethel Garcia, Chair, Domestic Affairs Committee  
Timothy Joaquin, Chairman, Tohono O'odham Legislative Council  
Lorinda Sam, Director, Tohono O'odham Nation Environmental Protection Office
  
4. Mr. James Garrison, State Historic Preservation Officer  
Arizona State Parks  
Attn: Dr. James Cogswell, Ph.D., Compliance Specialist/Archaeologist  
State Historic Preservation Office  
1300 West Washington Street  
Phoenix, Arizona 85007
  
5. Arizona Department of Environmental Quality  
ATTN: Mr. Henry Darwin, Director  
1110 West Washington Street  
Phoenix, AZ 85007



6. Arizona Department of Environmental Quality  
Southern Regional Office  
Office of Border Environmental Protection  
ATTN: Ms. Edna Mendoza, Director  
400 West Congress, Suite 433  
Tucson, AZ 85701
7. Arizona Game and Fish Department  
Ms. Laura Canaca, Project Evaluation Program Supervisor  
Habitat Branch- Project Evaluation Program  
5000 W. Carefree Highway  
Phoenix, AZ 85086-5000
8. Arizona Game and Fish Department  
Mr. John Windes, Habitat Program Manager, Region V  
555 N. Greasewood Road  
Tucson, AZ 85023
9. Mr. Nova Blazej, Manager Environmental Review Office Coordinator  
U.S. Environmental Protection Agency  
Region 9  
75 Hawthorne Street  
San Francisco, CA 94105
10. Ms. Lisa Hanf, Office of Federal Activities  
U.S. Environmental Protection Agency  
75 Hawthorne Street  
San Francisco, California 94105
11. U.S. Fish and Wildlife Service  
Arizona Ecological Services Field Office  
ATTN: Mr. Steve Spangle, Field Supervisor  
2321 West Royal Palm Road, Suite 103  
Phoenix, AZ 85021-4915
12. Department of the Interior  
ATTN: Mr. Jon Andrew  
1849 C Street, NW  
MS 3428  
Washington, DC 20240
13. U.S. Fish and Wildlife Service  
Arizona Ecological Services Field Office  
ATTN: Ms. Jean A. Calhoun, Assistant Field Supervisor  
201 N. Bonita Avenue, Suite 141  
Tucson, AZ 85745

14. U.S. Army Corps of Engineers  
Ms. Marjorie Blaine, Senior Project Manager  
5205 East Comanche Street  
Tucson, AZ 85707
  
15. U.S. Army Corps of Engineers  
Colonel Thomas H. Magness, District Commander  
915 Wilshire Boulevard  
Suite 980  
Los Angeles, California 90017
  
16. Mr. Edward Drusina, Commissioner  
International Boundary and Water Commission  
4171 North Mesa  
Building C, Suite C-100  
El Paso, TX 79902-1441
  
17. Mr. Bernie Kruse, Supervisory General Engineer  
International Boundary and Water Commission  
4171 North Mesa  
Building C, Suite 310  
El Paso, Texas 79902
  
18. Ms. Sharon Bronson, Supervisor, District 3  
Pima County Board of Supervisors  
130 West Congress St., 11<sup>th</sup> floor  
Tucson, AZ 85701
  
19. Mr. Chuck Huckelberry, County Administrator  
Pima County  
130 West Congress St., 10<sup>th</sup> Floor  
Tucson, AZ 85701



U.S. Customs and  
Border Protection

May 28, 2013

Colonel Thomas H. Magness, District Commander  
U.S. Army Corps of Engineers  
915 Wilshire Boulevard  
Suite 980  
Los Angeles, CA 90017

**SUBJECT: Environmental Assessment for the Proposed Construction, Operation and Maintenance of Integrated Fixed Towers on the Tohono O'odham Nation, Office of Technology Innovation and Acquisition, U.S. Border Patrol, Tucson Sector, Arizona**

Dear Colonel Magness:

On behalf of the Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP), the U.S. Army Corps of Engineers (USACE), Fort Worth District, is preparing an Environmental Assessment (EA) for the Office of Technology Innovation and Acquisition's (OTIA) construction, maintenance and operation of Integrated Fixed Towers (IFT) for the U.S. Border Patrol (USBP) in the Ajo and Casa Grande Stations' Areas of Responsibility within the Border Patrol's Tucson Sector. The proposed action is located on the Tohono O'odham Nation within Pima County, Arizona. This proposed system of towers and access/approach roads would create a communications network in support of overall law enforcement situational awareness in the project area.

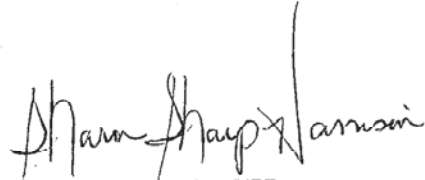
The EA will analyze the potential for significant adverse impacts and beneficial effects on the environment from the proposed action and two alternatives (alternative 1 and the no action alternative). The proposed action includes the construction of up to 15 new sensor and communication towers, including tower access/approach road construction, improvements, repairs, and maintenance. Additionally, proposed tower construction at one other site will be analyzed as alternative 1. The no action alternative reflects conditions within the project area should the proposed action not be implemented. Enclosed is a map showing the 15 new tower sites and one alternative proposed as part of OTIA's Tohono O'odham Nation IFT Project (Figure 1).

CBP is gathering data and input from federal, state, tribal, and local governmental agencies, departments, and bureaus that may be affected by or otherwise have an interest in, this proposed action. Since your agency or organization may have particular knowledge and expertise regarding potential environmental impacts from CBP's proposed action, your input is sought regarding the likely or anticipated environmental effects of this proposed action. Your response should include any restrictions, permitting or other requirements with which CBP would have to comply during project siting, construction, and operation.

Per DHS Directive 023-1, Environmental Planning Program, we will provide your agency with a copy of the official Draft EA of OTIA's IFT proposed project for your review and comment. Please let us know if additional copies are needed.

Should you have any additional questions or concerns about this project please contact Ms. Sharon Sharp-Harrison at (571) 468-7174 or email at [sharon.l.sharp-harrison@cbp.dhs.gov](mailto:sharon.l.sharp-harrison@cbp.dhs.gov) at your earliest convenience. We look forward to working with you on this project.

Sincerely,

for 

Mary D. Hassell, CEP  
Environment and Real Estate  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition  
1901 S. Bell Street, Suite 700  
Alexandria, VA 20598

**Enclosure:** Figure 1. IFT Proposed Tower Locations

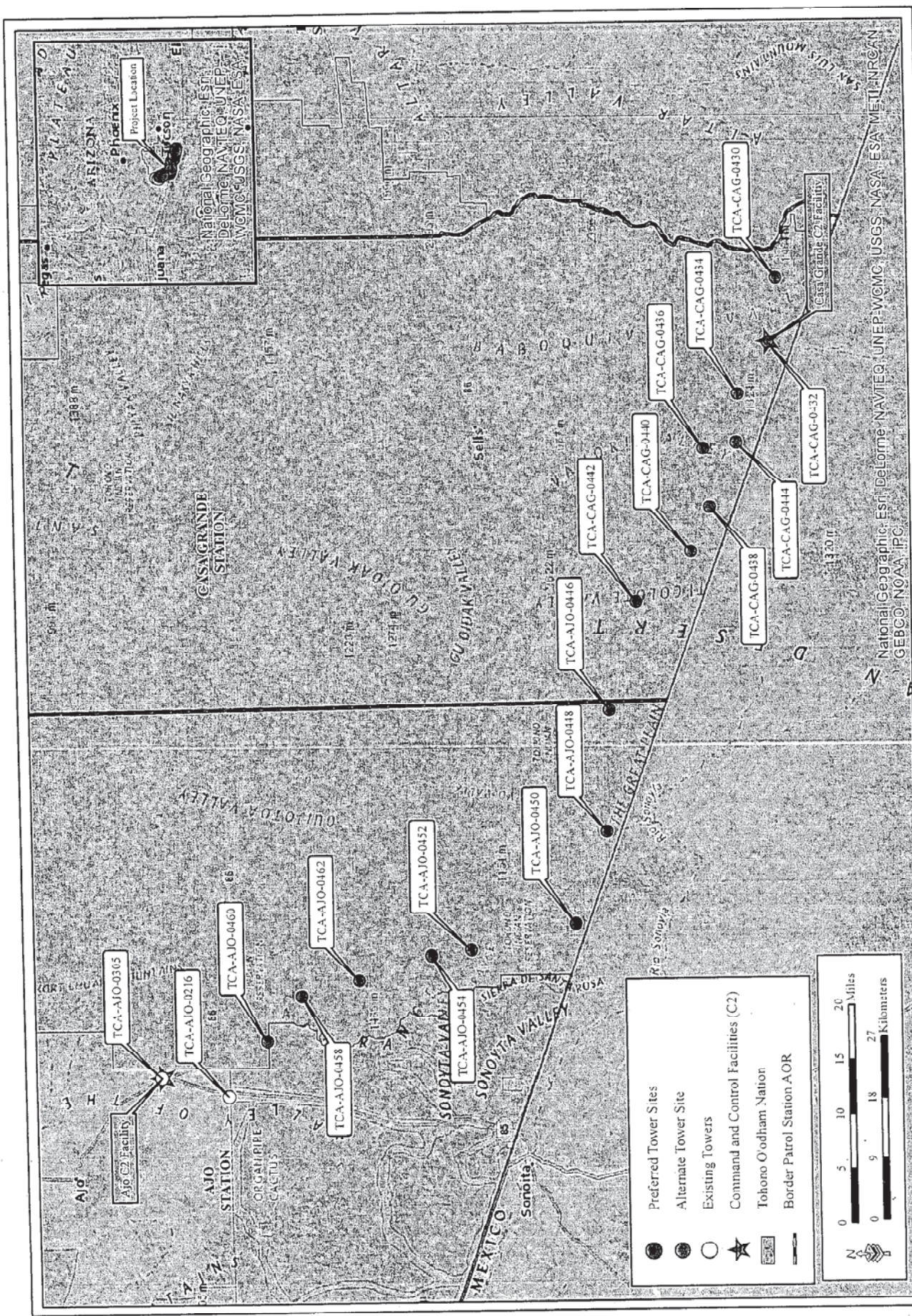


Figure 1. IFT Proposed Tower Locations - Ajo and Casa Grande Stations

Rec'd OTIA ENV  
06/17/2013



INTERNATIONAL BOUNDARY AND WATER COMMISSION  
UNITED STATES AND MEXICO

OFFICE OF THE COMMISSIONER  
UNITED STATES SECTION

June 7, 2013

Mary D. Hassell, CEP  
Environment and Real Estate  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition  
1901 S. Bell Street, Suite 700  
Alexandria, VA 20598

Subject: Environmental Assessment for the Proposed Construction, Operation and Maintenance of Integrated Fixed Towers on the Tohono O'odham Nation, Office of Technology Innovation and Acquisition, U.S. Border Patrol, Tucson Section, Arizona

Dear Ms. Hassell:

Thank you for the opportunity to provide scoping comments for the Environmental Assessment (EA) being prepared by the U.S. Army Corps of Engineers on behalf of U.S. Customs and Border Patrol (CBP). The EA will analyze impacts from the proposed construction, maintenance and operation of Integrated Fixed Towers (IFT) for the U.S. Border Patrol (USBP) in the Ajo and Casa Grande Stations Area of Responsibility within the USBP's Tucson sector. The IFTs will provide a communications network and will be constructed on the Tohono O'odham Nation within Pima County, Arizona.

From the map provided, many of the proposed tower locations appear to be near the international boundary (2 of the proposed 16 tower locations within 1 mile of the boundary, 11 within 5 miles, and 3 additional towers within 20 miles). The United States Section of the International Boundary and Water Commission (USIBWC) would like to offer the following comments for your consideration. The USIBWC has no jurisdiction within the Native American reservations in Arizona, and in this case, the Tohono O'odham Nation. However, if the proposed towers will be constructed along the international boundary, the following comments shall apply.

The USIBWC requests that proposed construction activities be accomplished in a manner that does not change historic surface runoff characteristics at the international border. The USIBWC will not approve any construction near the international boundary in the United States that increases, concentrates, or relocates overland drainage flows into either country. This requirement is intended to ensure that developments in one country will not cause damage to lands or resources in the other country. The USIBWC requests copies of any hydrological or hydraulic studies and site specific drawings for work proposed in the vicinity of the international boundary, particularly if culverts or other structures are proposed to be constructed in any drainage courses that cross the boundary. We also request that you assure that structures constructed along the U.S./Mexico border are maintained in an adequate manner and that liability issues created by these structures are addressed.

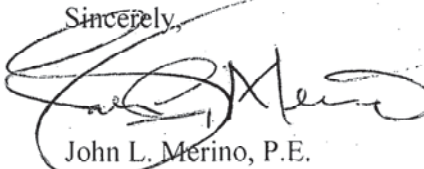
The USIBWC has a duty to access, maintain, and utilize the international boundary monuments along the United States/Mexico international land boundary. The USIBWC is charged with these duties through treaties and international agreements between the United States and Mexico. We require that the proposed works, and related facilities not affect the permanence (disturb the foundations) of existing

boundary monuments nor impede access for their maintenance. In addition, any proposed construction must allow for line-of-sight visibility between each of the boundary monuments.

For your information, on June 25, 1897 a Presidential Proclamation was signed by President William McKinley to keep lands free from obstruction as protection against smuggling of goods between the United States and Mexico. The proclamation reserved a strip of land 60 feet wide, parallel with and adjacent to the international boundary, extending one mile east and one mile west of Monument No. 122 within the City of Nogales, Arizona. Following a recommendation that additional lands be reserved along the boundary, President Theodore Roosevelt signed a Presidential Proclamation on May 27, 1907 reserving a 60-foot wide strip of land parallel with and adjacent to the international boundary on all lands which were not already patented (i.e. Indian Reservations, National Parks and Monuments, private property etc.) to the boundary line through New Mexico, Arizona, and California. It is the responsibility of the United States (federal agencies) to ensure the integrity of the 60-foot strip of reserved land. Similar lands are also designated by Mexico along its side of the land boundary. The provisions of the 1907 Presidential declaration for the 60-foot wide strip adjacent to the international boundary would not apply in the Tohono O'odham Nation.

Thank you for the opportunity to provide comments on projects potentially impacting the international boundary with Mexico. If you have any questions regarding these comments, please call me at (915) 832-4749.

Sincerely,



John L. Merino, P.E.  
Principal Engineer

Rec'd OTIA ENV  
Aug. 8, 2013



## United States Department of the Interior



**Fish and Wildlife Service**  
**Arizona Ecological Services Office**  
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AESO/SE  
02EAAZ00-2013-TA-0256

July 19, 2013

Ms. Mary D. Hassell  
Environment and Real Estate  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition  
1901 South Bell Street, Suite 700  
Alexandria, Virginia 20598

Dear Ms. Hassell:

Thank you for your correspondence of May 28, 2013, received in our office on June 6, 2013. This letter replies to your request for data and input related to the U.S. Customs and Border Protection (CBP) Office of Technology, Innovation, and Acquisition's proposal to construct, operate, and maintain a series of Integrated Fixed Towers (IFT) for the U.S. Border Patrol within the U.S. Border Patrol's Tucson Sector, Ajo and Casa Grande Stations, Pima County, Arizona. The project will occur entirely upon Tohono O'odham Nation (TON) lands.

The project area supports habitat for three species listed under the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.) (Act). The jaguar (*Panthera onca*), the Sonoran pronghorn (*Antilocapra americana sonoriensis*), and the lesser long-nosed bat (*Leptonycteris curasoae yerbabuena*) are all listed as endangered under the Act. In addition, critical habitat has been proposed for the jaguar and includes some area within the TON. An additional species, the Sonoran desert tortoise (*Gopherus morafkai*), is a candidate species under the Act and has a potential listing action scheduled within the next two years in response to a nationwide legal settlement.

The project also includes habitat for the cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*; pygmy-owl), a species formerly listed as endangered under the Act. A final rule to



remove the pygmy-owl from the Endangered Species list was published April 14, 2006. Therefore, the protective regulations of the Act no longer apply to the pygmy-owl. However, upon request, we continue to provide technical assistance related to the conservation of the pygmy-owl. The pygmy-owl is also a species of cultural and religious concern to the Tohono O'odham people.

Because impacts to these species or their habitats may occur as a result of the proposed project, we urge you to consider the following information and recommendations.

### **Jaguar**

In 1972, the jaguar (*Panthera onca*) was listed as endangered (37 FR 6476; March 30, 1972) in accordance with the Endangered Species Conservation Act of 1969 (ESCA), a precursor to the Endangered Species Act of 1973, as amended (Act; 16 U.S.C. 1531 *et seq.*). On July 22, 1997, the Service published a final rule clarifying that endangered status for the jaguar extended into the United States (62 FR 39147).

Jaguars are known from a variety of vegetation communities (Seymour 1989), including those found in the arid Southwest (Nowak 1994). In arid areas, these vegetation communities include thornscrub, desertscrub, lowland desert, mesquite grassland, Madrean oak woodland, and pine-oak woodland communities of northwestern Mexico and southwestern U.S. (Boydston and López González 2005, McCain and Childs 2008, López González and Brown 2002). Recently, several studies have helped refine general understanding of habitats that have been or might be used by jaguars in Arizona and New Mexico, including studies by the Sierra Institute Field Studies Program (2000), Hatten *et al.* (2002 and 2005), Menke and Hayes (2003), Boydston and López González (2005), Robinson *et al.* (2006), McCain and Childs (2008), and Sanderson and Fisher (2011 and 2013).

Like most large carnivores, jaguars have relatively large home ranges. According to Brown and López-González (2001), their home ranges are highly variable and depend on sex, topography, available prey, and population dynamics. However, little information is available on this subject outside tropical America, where several studies of jaguar ecology have been conducted. Several studies have shown that jaguars selectively use large areas of relatively intact habitat away from certain forms of human influence. In the state of Mexico, Monroy-Vichis *et al.* (2007) report that jaguars occur with greater frequency in areas relatively distant from roads and human populations. Zarza *et al.* (2007) report that towns and roads had an impact on the spatial distribution of jaguars (jaguars used more frequently than expected by chance areas located more than 6.5 km from human settlements and 4.5 km from roads) in the Yucatan peninsula.

Information related to current patterns of occupancy for jaguars in the border region are limited. Recently (1996 through 2013), five individual male jaguars have been documented in the U.S. From 2001 to 2007, three jaguars were photographed (two repeatedly) using infra-red camera traps in south-central Arizona, near the Mexico border. Specifically, these three jaguars were documented in four different mountain range complexes over an area extending from the

U.S./Mexico international border north 47 mi and 39 mi east to west (McCain and Childs 2008). The most recent sightings of the fifth jaguar have been from the Whetstone and Santa Rita mountains. This recent documentation is a result of an ongoing camera-trap study by the University of Arizona. Jaguars have been found using areas from rugged mountains at 1,577 m (5,174 ft) to flat lowland desert floor at 877 m (2,877 ft.) (McCain and Childs 2008). Most jaguar detections have occurred in Madrean oak woodland communities; however, jaguars have also been documented in open mesquite grasslands and desert scrub/grasslands on the desert valley floor. McCain and Childs (2008), in the earlier study, were not able to use camera trapping techniques in open valley bottoms due the open expanses and lack of landscape features to direct or funnel wildlife movements and consequently could not determine the extent open areas are used by jaguars in Arizona. They report, however, the jaguars must at least cross the open valleys between mountain ranges, approximately 37 mi apart. Although more information on movement and distribution patterns needs to be gathered on jaguars in the borderlands region of Arizona, New Mexico, Sonora, and Chihuahua, it is believed that the males recently documented in Arizona and New Mexico likely interact with or are part of a jaguar population in northwestern Mexico. Maintaining habitat linkages to facilitate movement within this population is important.

The TON has recently received a contract to expand the ongoing camera-trap study currently being conducted by the University of Arizona to the western slopes of the Baboquivari Mountains within the TON. This study will provide additional information over the next two years regarding the occurrence of jaguars within the TON.

We believe that the proposed action may result in degradation of jaguar habitat and disturbance to jaguars. Construction and maintenance of the tower sites, staging areas, and roads, as well as patrol and apprehension activities associated with the operation of the proposed towers, will result in removal, destruction, and degradation of vegetation that may provide cover to jaguars and their prey, and may disturb jaguars, causing changes in their habitat use and movement patterns. Construction of the proposed towers and associated roads and staging areas will impact (cause the loss and degradation) jaguar habitat through resulting ground disturbance, vegetation removal, soil compaction, erosion, and possible alteration of hydrological processes. These impacts will decrease the amount of cover available to jaguars and their prey. Further, disturbed ground will be susceptible to colonization by invasive non-native plants such as buffelgrass (*Pennisetum ciliare*). Non-native species may out-compete native species and may also carry fire better or burn hotter than native plants, which could also degrade jaguar habitat.

Construction, operations, and maintenance activities (including use of access roads) associated with the proposed action may result in increased disturbance to jaguars. Human activity, elevated noise levels (from vehicles, generators, etc.), and lights associated with construction and operations could possibly deter jaguar use of or movement through the area. Studies have shown that jaguars selectively use areas away from human influence (Monroy-Vichis *et al.* 2007, Zarza *et al.* 2007). Access-road construction and improvement and/or maintenance may lead to better public access and increased use, which could result in degradation of jaguar habitat and disturbance to jaguars. Also, an increase in public use will likely result in greater frequency of

human-caused fires, as well as increased hunting and illegal off-highway vehicle use. Vehicle and foot traffic can lead to the destruction of vegetation, increased erosion, and degradation of riparian and other sensitive habitats.

Given that the proposed system of towers is located on the border, increased disturbance to jaguars associated with the construction and operation of the proposed towers could possibly hinder jaguar movement into the U.S. from Mexico and within the project area. Maintaining connectivity between Arizona and Sonora is critical to the continued presence of jaguars in Arizona.

We recommend that the following measures be considered for inclusion as part of the proposed action related to the construction and operation of these towers in order to reduce the potential impacts to jaguars: 1) minimize impacts to vegetation, especially in likely jaguar travel corridors (rugged mountainous areas and drainages); 2) minimize the extent and width of roads associated with the proposed construction and operation of the towers; 3) work with the TON to control access to roads associated with the proposed towers; 4) locate staging areas at sites where vegetation disturbance will be minimized and outside of likely jaguar travel corridors; and 5) eliminate or limit the use of nighttime lighting associated with the construction and operation of the proposed towers in areas of likely jaguar movements. In particular, the area in the vicinity of the proposed TCA-CAG-0430 tower is within an area designated as a jaguar movement corridor during development of the Sasabe pedestrian fence. This area is also adjacent to proposed jaguar critical habitat. We recommend that the need for a tower in this area be reevaluated.

### **Proposed Jaguar Critical Habitat**

On August 20, 2012, we proposed critical habitat for the jaguar in response to a court order (77 FR 50214). Subsequently, we reopened the public comment period on proposed jaguar critical habitat on July 1, 2013 (78 FR 39237) to allow public comment on the economic analysis of proposed jaguar critical habitat, as well as slight modifications to the proposed boundaries. Based on the map enclosed with your May 28, 2013 correspondence, it appears that one of the proposed towers, TCA-CAG-0430, is just outside of the proposed critical habitat for the jaguar. Six units are proposed for designation as critical habitat (in the U.S. only); these are considered occupied at the time listing and contain the components of the primary constituent elements in the appropriate quantity and spatial arrangement sufficient to support the life-history needs of the species. Two of these units also contain subunits considered unoccupied at the time of listing, but which we deemed were essential to the survival and recovery of the jaguar. The six units proposed as critical habitat are: (1) Baboquivari Unit divided into subunits (1a) Baboquivari-Coyote Subunit, including the Northern Baboquivari, Saucito, Quinlan, and Coyote Mountains, and (1b) the Southern Baboquivari Subunit; (2) Atascosa Unit, including the Pajarito, Atascosa, and Tumacacori Mountains; (3) Patagonia Unit, including the Patagonia, Santa Rita, and Huachuca Mountains and the Canelo Hills; (4) Whetstone Unit, divided into subunits (4a) Whetstone Subunit, (4b) Whetstone-Santa Rita Subunit, and (4c) Whetstone-Huachuca Subunit; (5) Peloncillo Unit, including the Peloncillo Mountains both in Arizona and New Mexico; and

(6) San Luis Unit, including the northern extent of the San Luis Mountains at the New Mexico-Mexico border.

With regard to the proposed IFT project, the following subunits of Unit 1 may be affected by the proposed action:

Subunit 1a: Baboquivari-Coyote Subunit

Subunit 1a consists of 35,882 ha (88,667 ac) in the northern Baboquivari, Saucito, Quinlan, and Coyote Mountains in Pima County, Arizona. This subunit is generally bounded by the Baboquivari Valley to the west, State Highway 86 to the north, the Altar Valley to the east, and Three Peaks to the south. Land ownership within the unit includes approximately 4,360 ha (10,775 ac) of Federal lands; 20,036 ha (49,511 ac) of Tohono O'odham Nation lands; 8,483 ha (20,962 ac) of Arizona State lands; and 3,003 ha (7,420 ac) of private lands. The Federal land is administered by the Service and Bureau of Land Management. We consider the Baboquivari-Coyote Subunit occupied at the time of listing (37 FR 6476; March 30, 1972) based on one photo of a jaguar in 1996, and multiple photos of this same jaguar from 2001–2009, and it may be currently occupied. It contains all elements of the physical or biological feature essential to the conservation of the jaguar, except for connectivity to Mexico.

The primary land uses within Subunit 1a include ranching, grazing, border-related activities, Federal land management activities, and recreational activities throughout the year, including, but not limited to, hiking, birding, horseback riding, and hunting. Special management considerations or protections needed within the unit would need to address increased human disturbances in remote locations through construction of impermeable fences and widening or construction of roadways, power lines, or pipelines to ensure all PCEs remain intact.

Subunit 1b: Southern Baboquivari Subunit

Subunit 1b consists of 20,359 ha (50,308 ac) in the southern Baboquivari Mountains in Pima County, Arizona. This subunit is generally bounded by the Baboquivari Valley to the west, Three Peaks to the north, the Altar Valley to the east, and the U.S.-Mexico border to the south. Land ownership within the unit includes approximately 644 ha (1,591 ac) of Federal lands; 10,853 ha (26,818 ac) of Tohono O'odham Nation lands; 7,005 ha (17,310 ac) of Arizona State lands; and 1,857 ha (4,589 ac) of private lands. The Federal land is administered by the Service and Bureau of Land Management. The Southern Baboquivari Subunit provides connectivity to Mexico and was not considered occupied at the time of listing. It is essential to the conservation of the jaguar because it contributes to the species' persistence by providing connectivity to occupied areas that support individuals during dispersal movements during cyclical expansion and contraction of the nearest core area and breeding population in the Northwestern Recovery Unit.

The primary land uses within Subunit 1b include ranching, grazing, border-related activities, Federal land management activities, and recreational activities throughout the year, including, but not limited to, hiking, birding, horseback riding, and hunting. The proposed tower TCA-CAG-0430 would be located just outside of this unit of proposed jaguar critical habitat.

*Primary Constituent Elements for Jaguar Critical Habitat*

The physical or biological feature identified for proposed critical habitat for the jaguar is expansive open spaces in the southwestern United States with adequate connectivity to Mexico that contain a sufficient native prey base and available surface water, have suitable vegetative cover and rugged topography to provide sites for resting, and have minimal human impact (77 FR 50214). Because habitat in the United States is at the edge of the species' northern range, and is marginal compared to known habitat throughout the range, we have determined that all of the primary constituent elements discussed, below, must be present in each specific area to constitute high-quality jaguar habitat in the United States, including connectivity to Mexico (but that connectivity may be provided either through a direct connection to the border in that unit or by other adjacent areas that provide the connectivity essential for the conservation of the species). Based on our current knowledge of the physical or biological feature and habitat characteristics required to sustain the jaguar's vital life-history functions in the United States, the FWS determined that the primary constituent elements specific to jaguars are: Expansive open spaces in the southwestern United States of at least 84 to 100 square km (32 to 37 square mi) in size which:

- (1) Provide connectivity to Mexico;
- (2) Contain adequate levels of native prey species, including deer and javelina, as well as medium-sized prey such as coatis, skunks, raccoons, or jackrabbits;
- (3) Include surface water sources available within 20 km (12.4 mi) of each other;
- (4) Contain 1 to 50 percent canopy cover within Madrean evergreen woodland, generally recognized by a mixture of oak, juniper, and pine trees on the landscape, or semidesert grassland vegetation communities, usually characterized by *Pleuraphis mutica* (tobosagrass) or *Bouteloua eriopoda* (black grama) along with other grasses;
- (5) Are characterized by intermediately, moderately, or highly rugged terrain;
- (6) Are characterized by minimal to no human population density, no major roads, or no stable nighttime lighting over any 1-square-km (0.4-square-mi) area.
- (7) Are below 2,000 m (6,562 feet) in elevation.

While the proposed IFT project will directly impact some jaguar habitat elements (loss of vegetation cover due to construction of the IFTs and access roads), the primary effect to the PCEs of proposed jaguar critical habitat are related to the increase in human disturbance and presence during the construction, operation, and maintenance of the project. This directly affects PCE #6 and indirectly affects all of the remaining PCEs by potentially reducing the opportunity for jaguars to utilize habitat elements due to ongoing human presence and disturbance. In

particular, the area in the vicinity of the proposed TCA-CAG-0430 tower has been identified as within an area designated as a jaguar movement corridor during development of the Sasabe pedestrian fence. The proposed action would affect the ability of jaguars to move across the border to and from Mexico, which is crucial to the ongoing conservation of jaguars in the U.S.

We suggest that the recommendations discussed above related to effects to jaguars also be considered by CBP as recommendations related to reducing modifications to proposed jaguar critical habitat. Additionally, we recommend that CBP consider relocating tower TCA-CAG-0430 to a location well away from proposed critical habitat and the jaguar movement corridor as discussed above. This will reduce the amount of human activity and disturbance in an important area of jaguar habitat and a recognized movement corridor. We also recommend that site selection for all of the proposed towers and access roads address the need to maintain the availability of jaguar habitat elements such as water, prey, rugged terrain, appropriate vegetation cover, and low human presence.

### **Lesser Long-Nosed Bat**

The lesser long-nosed bat is migratory and found throughout its historical range from southern Arizona and extreme southwestern New Mexico through western Mexico and south to El Salvador. It is found in southern Arizona from the Picacho Mountains (Pinal County) southwest to the Agua Dulce Mountains (Pima County) and southeast to the Chiricahua Mountains (Cochise County), and south to the U.S./Mexico international border. Individuals have also been observed near the Pinaleno Mountains (Graham County) and as far north as Phoenix and Glendale (Maricopa County) (AGFD Heritage Data Management System [HDMS]). Within the U.S., vegetation communities used by the lesser long-nosed bat include Sonoran Desert scrub, semidesert and plains grasslands, and oak and pine-oak woodlands.

Two sets of resources, suitable day roosts, including maternity roosts, and suitable concentrations of food plants, are critical for the lesser long-nosed bat. Caves and mines are used as day roosts, with documentation showing that the species will fly long distances from roost sites to forage (Dalton *et al.* 1994, U.S. Fish and Wildlife Service 1997). Factors that identify potential roost sites as being "suitable" have not yet been identified, but maternity roosts tend to be very warm and poorly ventilated (U.S. Fish and Wildlife Service 1997). Such roosts reduce the energetic requirements of adult females while they are raising their young (Arends *et al.* 1995). Roosts in Arizona are occupied from April to as late as early November (Cockrum and Petryszyn 1991; Slauson 1999, 2000); although the species has been recorded in winter at hummingbird feeders in Tucson (Sidner and Houser 1990). In spring, adult females, most of which are pregnant, arrive in Arizona and gather into maternity colonies in southwestern Arizona. These roosts are typically at low elevations in Sonoran Desert scrub near concentrations of flowering columnar cacti. After the young are weaned, maternity colonies typically disband in July and August; some females and young move to higher elevations, ranging up to more than 6,000 ft, primarily in southeastern Arizona near concentrations of blooming paniculate agaves. Dates of these seasonal movements by lesser long-nosed bats are rather variable from one year to the next (Cockrum and Petryszyn 1991, Fleming *et al.* 1993).

Food requirements of the lesser long-nosed bat are very specific. The lesser long-nosed bat is a nectar-, pollen-, and fruit-eating bat. In Arizona, they primarily feed upon Palmer's agave (*Agave palmeri*), Parry's agave (*A. parryi*), desert agave (*A. deserti*), and possibly amole (*A. schottii*). Cacti fed upon include saguaro (*Carnegiea giganteus*) and organ pipe cactus (*Stenocereus thurberi*). Because of its very specific food requirements, the lesser long-nosed bat is considered a major pollinator and seed disperser of columnar cacti (e.g., saguaros) and paniculate agave. Adequate numbers of flowers and/or fruits are required within foraging range of day roosts and along migration routes to support large numbers of this bat. Location of good feeding sites therefore plays an important role in determining availability of potential roosting sites, and roost/food requirements must be considered jointly when discussing the habitat requirements of this bat. A suitable day roost is probably the most important habitat requirement, but potentially suitable roosts must be within reasonable foraging distances of sufficient amounts of required foods before they will be used by this bat.

Night flights from maternity colonies to flowering columnar cacti have been documented in Arizona at 24 km (15 mi), and in Mexico at 40 km (25 mi) and 61 km (38 mi) (one way) (Dalton *et al.* 1994; V. Dalton, Tucson, pers. comm., 1997; Y. Petryszyn, University of Arizona, pers. comm., 1997). A substantial portion of the lesser long-nosed bats at the Pinacate Cave in northwestern Sonora (a maternity colony) fly 40 to 50 km (25-31 mi) each night to foraging areas in Organ Pipe Cactus National Monument (U.S. Fish and Wildlife Service 1997). Horner *et al.* (1990) found that lesser long-nosed bats commuted 48 to 58 km (30-36 mi) round trip between an island maternity roost and the mainland in Sonora; the authors suggested these bats regularly flew at least 75 km (47 mi) each night. Lesser long-nosed bats have been observed feeding at hummingbird feeders many miles from the closest potential roost site (Petryszyn, pers. comm., 1997).

Considerable evidence exists suggesting a dependence of *Leptonycteris* on certain agaves and cacti. Activities that adversely affect the density and productivity of columnar cacti and paniculate agaves may adversely affect populations of lesser long-nosed bats (Abouhalder 1992, U.S. Fish and Wildlife Service 1997). Excess harvest of agaves in Mexico, collection of cacti in the U.S., and conversion of habitat due to urban expansion, agricultural uses, livestock grazing, and other development may contribute to the decline of long-nosed bat populations (U.S. Fish and Wildlife Service 1988). Activities that directly or indirectly promote invasions or increased density of non-native grasses, particularly buffelgrass, Lehmann lovegrass (*Eragrostis lehmanniana*), species of *Bromus*, and Mediterranean grass (*Schismus barbatus*), may result in increased fire frequency and intensity (Minnich 1994). Sonoran Desert scrub is not adapted to fire. The lesser long-nosed bat forages over wide areas, and roosts require extensive stands of cacti or agaves for food. Therefore, destruction of food plants many miles from a roost could have a negative impact on this bat (U.S. Fish and Wildlife Service 1997).

Impacts also result from law enforcement and apprehension of illegal immigrants and smugglers. Of particular concern is the creation of new roads for surveillance and other tactical infrastructure used for border enforcement. Use of helicopters, off-road vehicles, lights, sensors

and other enforcement equipment also have the potential to affect the lesser long-nosed bat and its habitat (U.S. Fish and Wildlife Service 2007). Loss of foraging habitat is also an important threat to lesser long-nosed bats. Causes of loss of foraging habitat in the action area include fire, livestock grazing, non-native invasive plants, and development (including the building of infrastructure on the border in the U.S.). Lesser long-nosed bats are directly affected by development, which removes forage habitat, but also indirectly as growing numbers of people increase the potential for roost disturbance. The impacts to lesser long-nosed bat habitat are of greatest concern because they tend to be permanent, long-term disturbances, as opposed to the often temporary, shorter-term impacts from fire, grazing, and agave harvesting (U.S. Fish and Wildlife Service 2007). Recent drought and apparent climate change are contributing to habitat degradation within the range of this species in the action area. For instance, the montane woodlands at the higher elevations (Santa Rita, Santa Catalina, and Huachuca mountains) have all experienced drought and associated large-scale catastrophic wildfires in recent years that have severely altered habitat and results in an increase in the importance of remaining lesser long-nosed bat habitat. The Baboquivari Mountains, which are in proximity to the proposed action, have also experienced impacts to lesser long-nose bat habitat resulting from drought and fire.

We expect the lesser long-nosed bat to be impacted both directly and indirectly by the proposed IFT project. Short-term, direct impacts of construction, operation, and maintenance activities on the bat or its habitats (including maternity colonies, roosting sites, foraging areas, and areas between known maternity colonies/roosting sites and foraging areas) include disturbance from temporary noise associated with construction equipment and helicopter operations, and disturbance from artificial lights used for nighttime construction. Long-term direct impacts could occur if roost sites are located in proximity to any of the proposed towers or access roads. Long-term, indirect impacts include human disturbance from increased public access facilitated by construction and maintenance of new and repaired roads, increased fire risk associated with increased public access, and an increase of non-native invasive plants associated with disturbance of native habitats.

Long-term indirect effects to two known lesser long-nosed bat maternity roosts may occur due to shifts in illegal border traffic and interdiction efforts to the west as a result of the proposed action. The Copper Mountain and Bluebird roost sites could potentially be subjected to increased border traffic and interdiction efforts if such traffic that currently occurs on the TON is shifted west in response to the construction of the proposed towers. Such indirect effects to maternity roosts may have population level effects to this species.

Land clearing associated with construction of the towers, staging areas, new roads, and road repairs, may result in loss of foraging habitat. As noted above, the lesser long-nose bat feeds on the nectar, pollen, and fruit produced by columnar cacti (saguaro and organ pipe) and pollen of various agave species. While bats have been documented flying many miles to locate patches of blooming cacti and agaves, there is an energetic cost to such flights that must be accounted for in the density and quality of the nectar source (U.S. Fish and Wildlife Service 2007).

Preferentially, significant nectar sources would be located in proximity to roosts. Since the quality of blooming may vary between days, weeks, and, over the course of years, sufficient



foraging habitat must be present and accessible around both maternity and summer roosts. Loss of suitably dense, healthy patches of cacti or agaves is a loss of foraging opportunity for the bat. The large columnar cacti that produce bat pollinated flowers are mature survivors of past reproductive events, and while these plants are long-lived, there must be successful recruitment of young cacti to the population if it is to persist. Actions that reduce the recruitment rate have long-term effects, particularly if followed by a die-off of adult cacti due to fire or freezing. It is not known how long it would take to restore a mature saguaro stand, but the estimates, assuming that conditions are right for recruitment and there is a seed base, are on the order of decades. Similarly, while agaves have a shorter life span, each plant only produces one flower stalk once in its life, and if that stalk is destroyed before it matures to blossom, it is not available to the bats. Over time, a single agave clone can provide flowering stocks over a number of years, but if land use practices or accidents eliminate the clone, there is no future use. Destruction of too many clones in an area may result in another long period without sufficient forage opportunities for the bats.

We recommend the following measures be considered for inclusion in the design of the proposed IFT project in order to reduce the potential impacts to lesser long-nosed bats: 1) minimize impacts to vegetation. In addition to providing forage, washes and other heavily vegetated areas may provide movement corridors for lesser long-nosed bats; 2) minimize the extent and width of roads associated with the proposed IFT project in order to reduce the likelihood of impacts to forage species; 3) work with the TON to control access to roads associated with the proposed towers; 4) locate staging areas at sites where vegetation disturbance will be minimized; 5) avoid impacts to all saguaros and agaves (if such impacts are unavoidable, we recommend transplanting them or replacing them with nursery stock at a 3:1 ratio in locations proximate to the project area); 6) limit construction activities during the night and reduce or eliminate any nighttime lighting associated with the proposed project; and 7) survey any potential lesser long-nosed bat roost habitat within 0.5 mile of any proposed tower or access road for the presence of lesser long-nosed bats and, if found, avoid disturbance or impacts to these roosts.

### **Sonoran Pronghorn**

The Sonoran subspecies of pronghorn (*Antilocapra americana sonoriensis*) was first described by Goldman (1945) and is the smallest of the four subspecies of pronghorn (Nowak and Paradiso 1983, Brown and Ockenfels 2007). The subspecies was listed throughout its range as endangered on March 11, 1967 (32 FR 4001) under the Endangered Species Preservation Act of October 15, 1966 without critical habitat. Three sub-populations of the Sonoran pronghorn are extant: 1) a U.S. sub-population in southwestern Arizona, 2) a sub-population in the Pinacate Region of northwestern Sonora, and 3) a sub-population on the Gulf of California west and north of Caborca, Sonora. The three sub-populations are predominantly geographically isolated due to barriers such as roads and fences, and, in the case of the two Sonora sub-populations, by distance. The Sonoran pronghorn potentially occurs in the western portion of TON lands.

The 1982 Sonoran Pronghorn Recovery Plan (FWS 1982) was revised in 1998 (FWS 1998). The recovery criteria presented in the revised plan entailed the establishment of a population of 300 adult pronghorn in one self-sustaining population for a minimum of five years, as well as the

establishment of at least one other self-sustaining population in the U.S. to reclassify the subspecies to threatened. Actions identified as necessary to achieve these goals include the following: 1) enhance present sub-populations of pronghorn by providing supplemental forage and/or water; 2) determine habitat needs and protect present range; 3) investigate and address potential barriers to expansion of presently used range and investigate, evaluate, and prioritize present and potential future reintroduction sites within historical range; 4) establish and monitor a new, separate herd(s) to guard against catastrophes decimating the core population, and investigate captive breeding; 5) continue monitoring sub-populations and maintain a protocol for a repeatable and comparable survey technique; and 6) examine additional specimen evidence available to assist in verification of taxonomic status. In 2002, a supplement and amendment to the 1998 Final Revised Sonoran Pronghorn Recovery Plan was prepared (FWS 2002). The FWS concluded that data do not yet exist to support establishing delisting criteria. Tasks necessary to accomplish reclassification to threatened status (as outlined in the 1998 plan) should provide the information necessary to determine if and when delisting will be possible and what the criteria should be. Survival of the Sonoran pronghorn is precarious and is likely dependent on drastic and untested methods (Krausman et al. 2005). The Sonoran Pronghorn Recovery Plan is currently being updated by a bi-national recovery team. In all planning related to Sonoran pronghorn recovery, we have concluded that, in order for recovery actions to be effective, providing an environment of reduced impacts related to anthropogenic activities is essential.

Sonoran pronghorn inhabit one of the hottest and driest portions of the Sonoran Desert. They forage on a large variety of perennial and annual plant species (Hughes and Smith 1990, Hervert et al. 1997a, FWS 1998). During drought years, Hughes and Smith (1990) reported cacti were the major dietary component (44 percent). Consumption of cacti, especially chain fruit cholla (*Cylindropuntia fulgida*, Pinkava 1999), provides a source of water during hot, dry conditions (Hervert et al. 1997a). Other important plant species in the diet of the pronghorn include pigweed (*Amaranthus palmeri*), ragweed (*Ambrosia* sp.), locoweed (*Astragalus* sp.), brome (*Bromus* sp.), and snakeweed (*Gutierrezia sarothrae*) (FWS 1998). Pronghorn will move in response to spatial limitations in forage availability (Hervert et al. 1997b). Water intake from forage is not adequate to meet minimum water requirements (Fox et al. 2000), hence pronghorn need, and readily use, both natural and artificial water sources (Morgart et al. 2005).

Historically, the Sonoran pronghorn ranged in the U.S. from approximately the Santa Cruz River in the east, to the Gila Bend and Kofa Mountains to the north, and to Imperial Valley, California, to the west (Mearns 1907, Nelson 1925, Monson 1968, Wright and deVos 1986, Paradiso and Nowak 1971; Figure 6). Bright et al. (2001) defined the present U.S. range of the Sonoran pronghorn as bordered by Interstate 8 to the north, the International Border to the south, the Copper and Cabeza mountains to the west, and State Route (SR) 85 to the east. This area encompasses 2,508 square miles (Bright et al. 2001). Sonoran pronghorn are estimated to be currently limited to < 25% of their historical habitat in Arizona and northern Sonora, Mexico (Krausman et al. 2005). A second U.S. population, considered non-essential and experimental, was recently established at Kofa NWR.

Although the U.S. Sonoran pronghorn population has increased significantly since the severe drought and Sonoran pronghorn population decline of 2002, the increase is not as great as the

Sonoran Pronghorn Recovery Team (Team) had predicted given the generally improved rainfall conditions since 2002, as well as tremendous multi-agency recovery efforts, including providing waters and forage enhancement plots, implementing seasonal restrictions on public access to pronghorn habitat during the critical fawning season, and a captive breeding program. The Team has suggested a number of reasons for this, including high cross border activity, drought, and deterioration of forage conditions beyond what is compensated for with the implementation of recovery actions. Information provided by land managers in OPCNM suggest off-road vehicle tracks have been seen progressively increasing in extent and density since 2002, throughout that portion of the pronghorn's range U.S. range (electronic mail from Tim Tibbitts, OCPNM and member of the Sonoran Pronghorn Recovery Team, September 21, 2009). It has been well documented that human presence in wildlands can disturb animals, causing them to unnecessarily expend energy avoiding people, thereby potentially reducing reproductive success (e.g., Manville 1983, van Dyke et al. 1986, Goodrich & Berger 1994, Primm 1996; as cited by Kerley et al. 2002) or increasing the likelihood of fatal encounters with humans (Kasworm and Manley 1990, Saberwal et al. 1994, Khramtsov 1995, Mattson et al. 1996; as cited by Kerley et al. 2002).

The slow rebound of the wild U.S. pronghorn population to numbers more in line with historical levels since the 2002 population decline is considered by some Team members to be evidence that human disturbance continues to affect the population, inhibiting its ability to recover. However, it is important to note that pronghorn are likely more resilient to impacts associated with human disturbance and similar stressors during periods of increased rainfall and resultant improved condition of forage and water resources. Unfortunately, in recent times, these periods have occurred less often and their occurrence is unreliable. Therefore, in our best professional judgment and based on current observations and predicted climate changes, it is likely that the effects of human disturbance and similar stressors on Sonoran pronghorn will be exacerbated by generally poor habitat conditions during the implementation of the proposed action, although periods of normal or above precipitation are expected to occur throughout the life of this project. Supplemental water and forage resources will likely continue to be of extreme importance to maintaining and improving Sonoran pronghorn populations in the U.S., particularly during times of drought and exposure to stressors such as human disturbance. With efforts to improve forage and water availability and the release of individuals from the captive pens, we are starting to see an improving population trend

While there are no substantiated recent occurrences of Sonoran pronghorn on TON lands, there are several anecdotal reports of occurrence in the northwestern portions of TON lands. In addition, as the Sonoran pronghorn population is augmented with individual pronghorn from the captive breeding pens, these new individuals have recently been using the area east of Highway 85 in Organ Pipe Cactus National Monument where pronghorn have not been found for many years. There is an increased potential for pronghorn to move to the western portions of the TON from this area east of Highway 85. TON lands are also within the identified 10(j) (non-essential, experimental population) area for Sonoran pronghorn reintroductions and population expansion. We believe that it is unlikely that TON lands are currently occupied by Sonoran pronghorn and, therefore, there is limited potential for direct effects to Sonoran pronghorn to occur as a result of the proposed action. In addition, because TON lands are within the 10(j) area, any occupancy of

the area by Sonoran pronghorn would fall under the regulatory guidelines of the 10 (j) population (76 FR 25593). Impacts from the proposed action to any pronghorn that occupy the project area in the future would need to be evaluated under the 10 (j) regulations.

However, the proposed action is likely to affect pronghorn that currently occupy the area to the west of TON lands. We believe that there is a the potential for indirect effects to occur affecting pronghorn that currently occupy Organ Pipe Cactus National Monument and the Cabeza Prieta National Wildlife Refuge due to a shift west of illegal border traffic and interdiction efforts resulting from the installation of the proposed towers on TON lands. These indirect effects may need to be analyzed through formal section 7 consultation.

Indirect effects and disturbance to Sonoran pronghorn and degradation of their habitat as a result of the project will primarily occur within OPCNM, BLM, and CPNWR, all of which are key areas to the survival and recovery of the U.S. population of pronghorn. CPNWR contains essential Sonoran pronghorn areas including fawning habitat, forage enhancement plots, and pronghorn water sites, as well as a semi-captive breeding pen in Child's Valley. OPCNM is also an essential area for pronghorn, particularly during the fawning period and annual spring warming-drying trend (i.e., pronghorn use OPCNM under conditions of greatest thermal and hydration stress). BLM lands north of OPCNM and east of CPNWR are also important to Sonoran pronghorn and include water sites. Additionally, a Sonoran pronghorn forage enhancement plot is proposed on BLM lands. Anecdotal evidence suggests that Sonoran pronghorn avoid and may abandon areas of high human activity, and that this behavior has led to fawn mortality, as is thought to be the case with pronghorn abandonment of the Granite Forage Enhancement Plot. If a shift in border activity to the west, away from TON lands, occurs as a result of the proposed action, this increase in border activity has the potential to reduce or eliminate the value of existing and proposed recovery actions for the Sonoran pronghorn. This is particularly true for CPNWR where there are no towers resulting in this area that is important for pronghorn conservation being vulnerable to impacts from shifting border traffic, while areas on OPCNM and the TON have tower coverage.

The proposed action may have a long-term beneficial effect on Sonoran pronghorn within the 10 (j) area if it results in greater effective control of the border leading to eventual decreased CBV and USBP activity in the project area. However, based on input received from land managers in the area of the Ajo-1 Tower project, this has not been the case. In fact, it appears as if there has been an increase of activity associated with border apprehensions and patrols [pers. communication with T. Tibbitts (OPCNM) and J. Atkinson (CPNWR); 7/9/13].

USBP patrol and interdiction activities (by vehicle, aircraft, foot, and/or horseback, including dragging operations) as a part of the project are anticipated to result in significant disturbance to pronghorn. Observations associated with the Ajo-1 tower project by land managers indicate that enforcement efforts are often focused in the areas of the towers [pers. comm. with T. Tibbitts (OPCNM) and J. Atkinson (CPNWR); 7/9/13]. If this pattern continues, the proposed action is likely to increase patrol and interdiction activities in the area of the proposed towers, potentially impacting pronghorn that may become established in the 10(j) area. As described above, this

disturbance can cause pronghorn to startle and/or flee, travel further distances to find suitable foraging, watering, and resting areas, and result in stress and short- and long-term denial of access to habitat, all of which can result in adverse physiological effects, injury to, or mortality of pronghorn. Fleeing behavior can cause fawns to be abandoned or separated from their mothers, which can leave them vulnerable to predator attack or cause physiological stress that results in death. Although requirements for ESA section 7 consultation for Federal agencies are reduced for 10(j) populations, we are available to coordinate with CBP and the TON with regard to actions and measures that can be taken within the 10(j) area to reduce impacts to pronghorn and enhance conservation of this species if pronghorn become established in the project area in the future.

We recommend the following measures be considered for inclusion in the design of the proposed IFT project in order to reduce the potential impacts to Sonoran pronghorn: 1) use biological monitors during the construction of the proposed towers and access roads to monitor for the occurrence of Sonoran pronghorn in proximity to construction areas. If Sonoran pronghorn are observed in an area prior to construction activities or in proximity to roads being used by construction vehicles, we recommend that activities be delayed until the pronghorn have moved out of the area; 2) construct towers in as close proximity to the U.S. Mexico border as is feasible. This will contribute to apprehending border crossers close to the border and reduce potential disturbance of pronghorn, including pronghorn that may become established in the future with the 10(j) area, and recovery infrastructure further west. We are supportive of tower locations as close to the border as possible. It appears that the proposed towers are in closer proximity to the border than for previous tower projects; 3) work with the TON to control access to roads associated with the proposed towers; and 4) monitor border activities west of TON lands during construction and operation of the proposed towers. Work with land managers to assess any increase in intensity or extent of border activities in relation to known Sonoran pronghorn use areas, water sources, forage enhancement plots, captive breeding pens, and other recovery actions that may be the result of shifts in border traffic resulting from the proposed action. Coordinate with land managers to develop a response to such shifts in border activity to address impacts to Sonoran pronghorn and recovery actions.

### **Sonoran Desert Tortoise**

The Sonoran desert tortoise is listed as a candidate species under the Act. A nationwide legal settlement (multi-district litigation settlement (MDL)) places a deadline to resolve the listing status of this species by Fiscal Year 2015. The Sonoran desert tortoise occupies the majority of the proposed IFT project area.

Adult Sonoran desert tortoises range in length from 8 to 15 inches (in), with a relatively high domed shell, usually brownish with a pattern and prominent growth lines. The plastron (bottom shell) is yellowish and is not hinged. The hind limbs are very stocky and elephantine; forelimbs are flattened for digging and covered with large conical scales. Males are differentiated from females by having elongated gular (throat) shields, chin glands visible on each side of the lower jaw (most evident during the breeding season), a concave plastron, and larger overall size.

Sonoran desert tortoises are most closely associated with the Arizona Upland and Lower Colorado River subdivisions of Sonoran desertscrub and Mojave desertscrub vegetation types and, to a lesser extent, other habitat types within their range and elevation parameters. They occur most commonly on rocky, steep slopes and bajadas (lower mountain slopes) often formed by the coalescing of several alluvial fans and in paloverde-mixed cacti associations. Washes and valley bottoms may be used in dispersal. Sonoran desert tortoises in Arizona occur between 904 to 4,198 feet in elevation.

Historically, Sonoran desert tortoises were found in suitable habitat south and east of the Colorado River in Arizona in all counties except for Navajo, Apache, Coconino, and Greenlee counties, and south to the Rio Yaqui in southern Sonora, Mexico. Historical core populations remain extant in Arizona. Concerns for population genetics exist due to habitat fragmentation and barriers (roads, urban development, canals, railroads, etc.) in valley bottoms used for dispersal and exchange of genetic material. Currently occupied range in Mexico is less understood.

Threats to the Sonoran desert tortoise include nonnative plant species invasions and altered fire regimes; urban and agricultural development; barriers to dispersal and genetic exchange; off-highway vehicles; roads and highways; historical ironwood and mesquite tree harvest in Mexico; improper livestock grazing (predominantly in Mexico); undocumented human immigration and interdiction activities; illegal collection; predation from feral dogs; human depredation and vandalism; drought; and climate change.

The proposed action has the potential to directly and indirectly affect the Sonoran desert tortoise. Direct effects include the loss of and fragmentation of habitat, as well as the potential for direct mortality through construction activities and road mortality from vehicle collisions during construction and operation of the towers. Construction of new access roads and increased use of new and existing roads will contribute to the potential for these effects. Indirect effects could occur from increased occurrence of invasive species and associated fires, and an increased potential for fire from operations and increased use of roads. There is also the potential for illegal collection of tortoises.

We recommend the following measures be considered for inclusion in the design of the proposed IFT project in order to reduce the potential impacts to Sonoran desert tortoises: 1) conduct surveys for Sonoran desert tortoise prior to implementation of the proposed project and avoid impacts to occupied areas; 2) use biological monitors during the construction of the proposed towers and access roads to monitor for the occurrence of Sonoran desert tortoise in proximity to construction areas. If Sonoran desert tortoise are observed in the construction area, follow the attached Arizona Game and Fish Department (AGFD) Guidelines for Handling Tortoises to move the tortoise(s) out of harm's way; 3) check the immediate area around construction vehicles and equipment prior to operation to determine the presence of any tortoises and move them according to the AGFD guidelines; 4) minimize impacts to plant communities and existing topography and drainages. These are important habitat elements relate to forage, movement and

shelter for the tortoise; 5) minimize the extent and width of roads associated with the proposed IFT project in order to reduce the likelihood for road mortality and impacts to tortoise habitat; 6) work with the TON to control access to roads associated with the proposed towers; 4) locate staging areas at sites where vegetation disturbance will be minimized; and 5) provide outreach and education to individuals involved in the construction and operation of the proposed towers with regard to the laws and regulations related to the collection of Sonoran desert tortoises, and to increase their awareness for the potential for vehicle collisions with tortoises.

### **Cactus Ferruginous Pygmy-owl**

The project area also includes habitat for the pygmy-owl. The pygmy-owl was originally listed as an endangered species in 1997. Following a series of litigation actions, a final rule to remove the pygmy-owl from the Endangered Species list was published April 14, 2006. The pygmy-owl remains a species of conservation concern for the FWS. Currently in Arizona, the pygmy-owl is found only in portions of Pima and Pinal Counties. The Arizona Breeding Bird Atlas reports confirmed occurrences of the pygmy-owl in only three blocks distributed in Pima and Pinal Counties (Arizona Breeding Bird Atlas (ABBA) 2005, p. 219). Twelve other blocks recorded probable (3) or possible (9) occurrences, but none occurred outside of Pima and Pinal Counties (ABBA 2005, p. 219). Recent surveys indicate that probably fewer than 50 adult pygmy-owls exist in the state, with 10 or fewer nest sites on an annual basis (Abbate *et al.* 2000, pp. 15–16, AGFD unpublished data). However, since the pygmy-owl was delisted in 2006 (71 FR 194521; April 14, 2006), surveys, monitoring, and other research on pygmy-owls has declined. Limited survey and monitoring in Arizona from 2009 to 2013 documented that pygmy-owls still occupy historical locations in the Altar Valley, Avra Valley, and Organ Pipe Cactus National Monument, all within Pima County (Service 2009, p. 1; Tibbitts 2011, p. 1; Service 2011, p. 1). Comprehensive surveys have not been conducted on TON lands, which is located in the central portion of both the historical and current distribution of pygmy-owls in Arizona. However, a number of surveys have been completed for various utility projects on the Nation, and the pygmy-owl is known to occur there. Distribution of the data from these surveys has been restricted by the Nation and is not available for analysis. There are large areas of suitable habitat on the Nation, but the information we have indicates that pygmy-owls are patchily distributed, just as in other areas of the State, and occur at similar densities.

In Arizona, pygmy-owls rarely occur below 300 meters (m) (1,000 feet (ft)) or above 1,200 m (4,000 ft) (Proudfoot and Johnson 2000, p. 5), except perhaps during dispersal (AGFD 2008, p. 3). Historically, in Arizona, the pygmy-owl nested in Fremont cottonwood-mesquite forests and mesquite bosques (woodlands) associated with major drainages and their tributaries and the subspecies is considered by some to be a preferential riparian nesting species. The pygmy-owl in Arizona also occupies upland Sonoran desert scrub, often associated with xeroriparian areas. Species associated with these areas are *Prosopis* spp. (mesquite), *Parkinsonia* spp. (palo verde), *Acacia* spp. (acacia), *Olneya tesota* (ironwood), and *Carnegiea gigantea* (saguaro cactus) (Proudfoot and Johnson 2000, p. 5).

The patchy, dispersed nature of the pygmy-owl populations in Arizona and Mexico (Flesch 2003) suggests that the overall population may function as a metapopulation. A metapopulation is a set of subpopulations within an area, where movement and exchange of individuals among population segments is possible, but not routine. A metapopulation's persistence depends on the combined dynamics of the productivity of subpopulations, the maintenance of genetic diversity, the availability of suitable habitat for maintenance and expansion of subpopulations, and the "rescue" of subpopulations that have experienced local extinctions by the subsequent recolonization of these areas by dispersal from adjacent population segments (Hanski and Gilpin 1991, 1997). The local groups of pygmy-owls within Arizona may function as subpopulations within the context of metapopulation theory. However, more information is needed regarding the population dynamics of pygmy-owls in Arizona.

We anticipate that the proposed action will both directly and indirectly affect the pygmy-owl. Direct effects include the loss and fragmentation of habitat and impacts to nesting pygmy-owls from disturbance if construction or operation activities occur in proximity to active nests. One specific direct effect to pygmy-owl nests would be the removal of saguaros during construction. Saguaros provide nest sites for the pygmy-owl. Indirect effects include increased potential for the occurrence of invasive species and associated fires, and the increased potential for fire and human activity disturbance associated with increased access to the area.

We recommend the following measures be considered for inclusion in the design of the proposed IFT project in order to reduce the potential impacts to cactus ferruginous pygmy-owls: 1) conduct surveys for cactus ferruginous pygmy-owls prior to implementation of the proposed project and avoid impacts to occupied areas; consider seasonal restriction of activities to avoid disturbing pygmy-owls during the nesting season. Avoid working during the nesting season if work will occur within one half mile of a nest site. Please coordinate this effort with the TON Wildlife and Vegetation Management Program; 2) use biological monitors during the construction of the proposed towers and access roads to ensure that saguaros are avoided, transplanted, or replaced. Saguaros provide nest sites for pygmy-owls and are also culturally significant to the Tohono O'odham people; 3) minimize impacts to plant communities. These provide important habitat elements for the pygmy-owl related to forage, movements, cover, and nesting; 4) minimize the extent and width of roads associated with the proposed IFT project in order to reduce the habitat loss and fragmentation; 5) work with the TON to control access to roads associated with the proposed towers; and 6) locate staging areas at sites where vegetation disturbance will be minimized.

Should project plans change or if additional information on the distribution of listed or proposed species becomes available, we recommend that you contact our office to determine if additional concerns or issues need to be considered. We encourage your continued coordination with the Tohono O'odham Nation's Wildlife and Vegetation Management Program as this project is implemented. In keeping with our trust responsibilities to American Indian Tribes, by copy of this letter, we will notify the Tohono O'odham Nation, which may be affected by the proposed action. We encourage you to invite the Bureau of Indian Affairs to participate in the review of



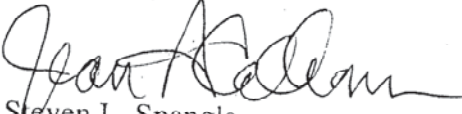
Ms. Mary D. Hassell

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your proposed action. We also encourage you to coordinate with AGFD to identify and resolve potential issues under the authority of that agency and that may result from the proposed action.

Should you require further assistance or if you have any questions, please contact Scott Richardson at (520) 670-6150 (x242) or Jean Calhoun (x223). Thank you for your continued efforts to conserve endangered species.

Sincerely,

  
for Steven L. Spangle  
Field Supervisor

Enclosure

cc (hard copies / with enclosure):

Field Supervisor, Fish and Wildlife Service, Phoenix, AZ ( 2 copies )

Jean Calhoun, Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ

cc (electronic copies / with enclosure):

Customs and Border Protection, Washington D.C (Attn: Sharon Sharp-Harrison)

Tohono O'odham Nation Wildlife and Vegetation Management Program, Sells, AZ  
(Attn: Karen Howe)

Regional Supervisor, Arizona Game and Fish Department, Tucson, AZ  
(Attn: John Windes)

pep@azgfd.gov, Habitat Branch, Arizona Game and Fish Department, Phoenix, Arizona

DOI Border Coordinator, Phoenix, AZ (Attn: Kathy Pedrick)

CBP DOI Liaison, Washington D.C. (Attn: Jon Andrew)

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GUIDELINES FOR HANDLING SONORAN DESERT TORTOISES  
ENCOUNTERED ON DEVELOPMENT PROJECTS

Arizona Game and Fish Department

Revised October 23, 2007

The Arizona Game and Fish Department (Department) has developed the following guidelines to reduce potential impacts to desert tortoises, and to promote the continued existence of tortoises throughout the state. These guidelines apply to short-term and/or small-scale projects, depending on the number of affected tortoises and specific type of project.

The Sonoran population of desert tortoises occurs south and east of the Colorado River. Tortoises encountered in the open should be moved out of harm's way to adjacent appropriate habitat. If an occupied burrow is determined to be in jeopardy of destruction, the tortoise should be relocated to the nearest appropriate alternate burrow or other appropriate shelter, as determined by a qualified biologist. Tortoises should be moved less than 48 hours in advance of the habitat disturbance so they do not return to the area in the interim. Tortoises should be moved quickly, kept in an upright position parallel to the ground at all times, and placed in the shade. Separate disposable gloves should be worn for each tortoise handled to avoid potential transfer of disease between tortoises. Tortoises must not be moved if the ambient air temperature exceeds 40° Celsius (105° Fahrenheit) unless an alternate burrow is available or the tortoise is in imminent danger.

A tortoise may be moved up to one-half mile, but no further than necessary from its original location. If a release site, or alternate burrow, is unavailable within this distance, and ambient air temperature exceeds 40° Celsius (105° Fahrenheit), the Department should be contacted to place the tortoise into a Department-regulated desert tortoise adoption program. Tortoises salvaged from projects which result in substantial permanent habitat loss (e.g. housing and highway projects), or those requiring removal during long-term (longer than one week) construction projects, will also be placed in desert tortoise adoption programs. *Managers of projects likely to affect desert tortoises should obtain a scientific collecting permit from the Department to facilitate temporary possession of tortoises.* Likewise, if large numbers of tortoises (>5) are expected to be displaced by a project, the project manager should contact the Department for guidance and/or assistance.

Please keep in mind the following points:

These guidelines do not apply to the Mojave population of desert tortoises (north and west of the Colorado River). Mojave desert tortoises are specifically protected under the Endangered Species Act, as administered by the U.S. Fish and Wildlife Service.

These guidelines are subject to revision at the discretion of the Department. We recommend that the Department be contacted during the planning stages of any project that may affect desert tortoises.

Take, possession, or harassment of wild desert tortoises is prohibited by state law. Unless specifically authorized by the Department, or as noted above, project personnel should avoid disturbing any tortoise.



September 19, 2013

Ms. Nina Siquieros  
Superintendent  
Bureau of Indian Affairs, Papago Agency  
Environmental Quality Services  
2600 North Central Avenue  
4<sup>th</sup> Floor Mailroom  
Phoenix, AZ 85004-3008

Dear Ms. Siquieros:

The Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP), Office of Technology Innovation and Acquisition (OTIA) would like to invite the Bureau of Indian Affairs (BIA), Papago Agency to be a cooperating agency for the development of an environmental assessment (EA) for the proposed Integrated Fixed Towers (IFT) within the Chukut Kuk and Gu-Vo District of the Tohono O'odham Nation. CBP has also contacted the Tohono O'odham Nation to request their participation as a cooperating agency for this undertaking.

On May 9, 2013 the Tohono O'odham Legislative Council passed Resolution #13-142, *Authorizing the U.S. Customs and Border Protection to Conduct Environmental Assessments, and Conduct Pre-Development Activities for the Proposed Integrated Fixed Tower Program in Accordance with the Laws of the Nation and the United States.*

CBP is preparing a National Environmental Policy Act (NEPA) document to adequately identify resource impacts and any potential mitigation to ensure resource protection where necessary. CBP is ultimately responsible for assuring compliance with the requirements of NEPA, the Endangered Species Acts of 1973 as amended, the National Historic Preservation Act of 1966 as amended, and the Archeological and Historical Preservation Act of 1974.

As a cooperating agency, we are requesting the Papago Agency cooperate and provide input, review, and comments in the development of the Environmental Assessment (EA) to ensure the document meets the needs of the Papago Agency and the BIA. As the lead Federal agency for this undertaking, CBP will solely be responsible for signing and distributing the final EA and Finding of No Significant Impact (FONSI).

We request that BIA advise OTIA that they have agreed to be a Cooperative Agency and agree to comply with the current schedule (subject to change) for review of our NEPA documents. We can provide you with the current schedule for discussion at our conference call.



Ms. Nina Siquieros, Page 2

Should you have any additional questions or concerns about this project please contact me at (949) 425-7081 or email at [charles.h.parsons@cbp.dhs.gov](mailto:charles.h.parsons@cbp.dhs.gov). We look forward to working with you on this project.

Sincerely,



Charles H. Parsons, PG  
Acting Environmental Branch Chief  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition  
24000 Avila Road, Suite 5020  
Laguna Niguel, CA 92677

Copies:

Amy Heuslein  
Branch Chief  
Bureau of Indian Affairs, Papago Agency  
Environmental Quality Services  
2600 North Central Avenue  
4th Floor Mailroom  
Phoenix, AZ 85004-3008

Bernadette Blackwater  
Tohono O'odham Nation  
Planning & Economic Development Department  
Realty Office  
P.O Box 837  
Sells, Arizona 85634

**Enclosure:** Figure 1. Proposed IFT Tower Locations

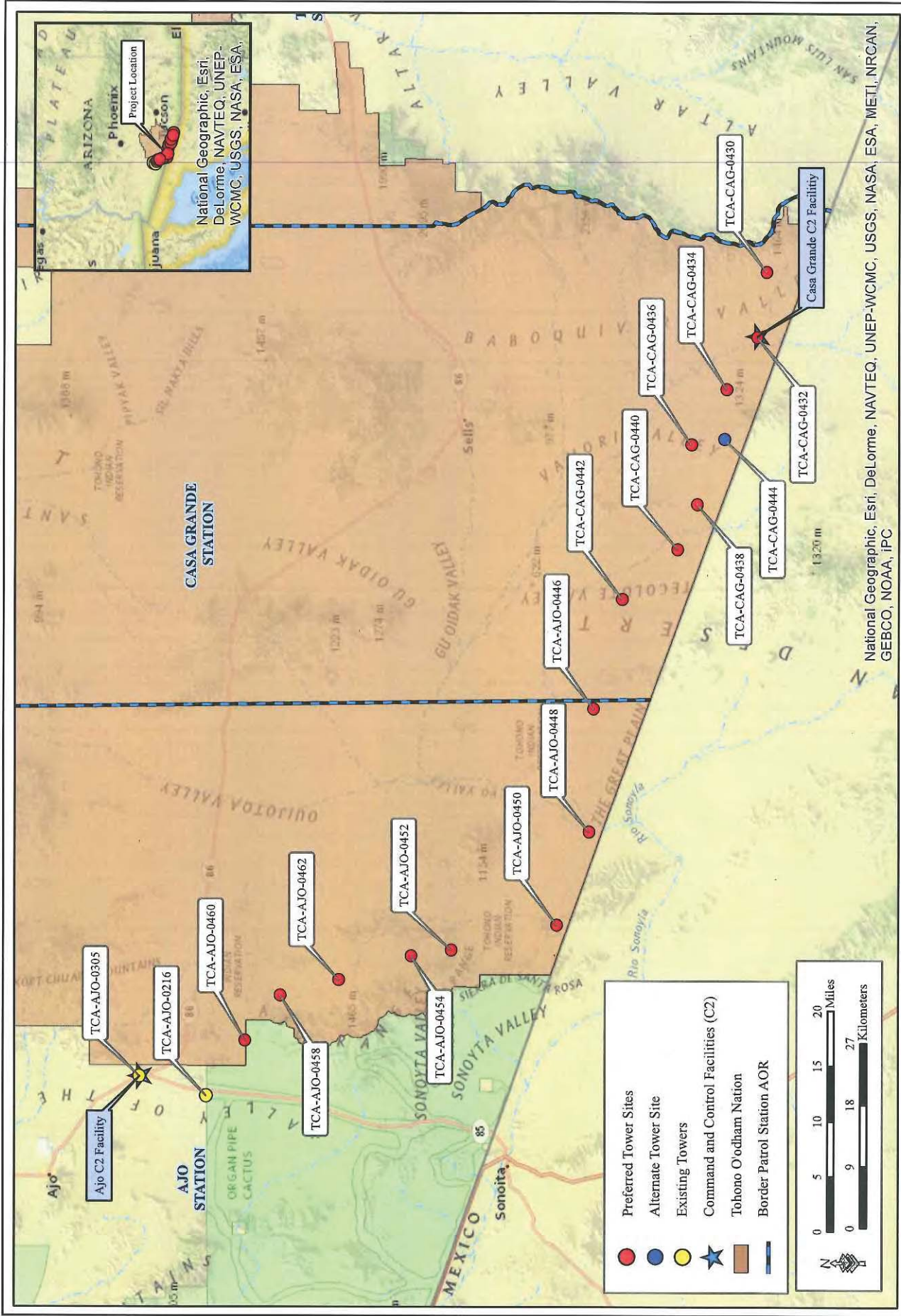


Figure 1. IFT Proposed Tower Locations - Ajo and Casa Grande Stations



September 19, 2013

Peter Steere  
Tribal Historic Preservation Officer  
Tohono O'odham Nation  
Cultural Center Museum  
Fresnal Canyon Road & BIA Indian Route 19  
Topawa, AZ 85639

RE: Revised Draft Cultural Resources Inventory in Support of Integrated Fixed Towers on the Tohono O'odham Nation, U.S. Border Patrol, Tucson Sector, Arizona. Contract Number W9126G-09-D-0067, Delivery Order 0060

Mr. Steere:

Please find enclosed and one (1) hard copy and one (1) electronic copy of the revised draft cultural resources survey report for the proposed Integrated Fixed Towers, as referenced above, for your review and comment. Revisions to the report were made as a result of comments received on the draft report, comments received during site visits with Chukut Kuk and Gu-Vo District representatives on 12 and 26 August, 2013, and new information received after the draft report was completed. Please provide GSRC with Tohono O'odham Nation site numbers for the sites with Field Site (FS) numbers. The official numbers will replace the FS numbers for the final report.

Please do not hesitate to call me at (949) 425-7081 or contact me at [charles.h.parsons@cbp.dhs.gov](mailto:charles.h.parsons@cbp.dhs.gov) if you have any questions, or require additional hard copies of the report.

Sincerely,

A handwritten signature in blue ink that reads "Charles H. Parsons".

Charles Parsons  
Acting Environmental Branch Chief  
Environment & Real Estate Branch  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition

cc: Charles McGregor



# United States Department of the Interior

BUREAU OF INDIAN AFFAIRS  
PAPAGO AGENCY  
P.O. Box 490  
Sells, Arizona 85634



IN REPLY REFER TO:

Office of the Superintendent

SEP 25 2013

Charles H. Parsons, PG  
Acting Environmental Branch Chief  
U.S. Customs and Border Protection  
Office of Technology Innovation & Acquisition  
24000 Avila Road, Suite 5020  
Laguna Niguel, California 92677

Re.: Integrated Fixed Towers Environmental Assessment, Tohono O'odham Nation

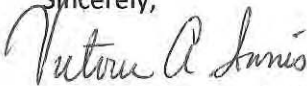
Mr. Parsons:

Thank you for your invitation dated September 19, 2013 for the Bureau of Indian Affairs (BIA) Papago Agency to be a cooperating agency for the proposed Integrated Fixed Towers (IFT) Environmental Assessment (EA).

BIA appreciates your invitation to be a cooperating agency and accepts as we have: (1) special expertise (40 CFR 1508.26) we can offer to assist in the preparation and review of the EA and (2) jurisdiction by law (40 CFR 1508.15) through the issuance of permanent easements, temporary construction easements, leases, permits, etc. that are required for the IFT. Please keep us apprised of scoping activities, public comments, meetings, etc. so that we can have these recorded in our project files.

We look forward to working with you in a collaborative effort that will satisfy the requirements of both our agencies.

If you have any questions, please contact Nina Siquieros, Superintendent at 520/383-3286 or via email at [nina.siquieros@bia.gov](mailto:nina.siquieros@bia.gov). Alternatively, you may reach Amy Heuslein, Regional Environmental Protection Officer, BIA Western Regional Office (WRO), at 602/379-6750 or by email at [amy.heusein@bia.gov](mailto:amy.heusein@bia.gov).

Sincerely,  
  
Acting Superintendent

cc: Bernadette Blackwater, TON Realty  
Amy Heuslein, BIA/WRO/MS-620EQS  
File

ACTIVITIES MGMT & ENV  
LAGUNA NIGUEL, CA

2013 OCT 22 10 14 AM

RECEIVED  
U.S. DEPARTMENT OF  
HOMELAND SECURITY



U.S. Customs and  
Border Protection

September 30, 2013

Garry J. Cantley  
Regional Archeologist  
Bureau of Indian Affairs  
Western Regional Office  
Environmental Quality Services  
2600 North Central Avenue  
4th Floor Mailroom  
Phoenix, AZ 85004-3008

RE: Revised Draft Cultural Resources Inventory in Support of Integrated Fixed Towers on the Tohono O'odham Nation, U.S. Border Patrol, Tucson Sector, Arizona. Contract Number W9126G-09-D-0067, Delivery Order 0060

Mr. Cantley:

Please find enclosed and one (2) hard copies and two (2) electronic copies of the revised draft cultural resources survey report for the proposed Integrated Fixed Towers, as referenced above, for your review and comment. Please do not hesitate to call Charles Parsons at (949) 425-7081 or by e-mail at [charles.h.parsons@cbp.dhs.gov](mailto:charles.h.parsons@cbp.dhs.gov) if you have any questions, or require additional hard copies of the report.

Sincerely,

A handwritten signature in blue ink that reads "Charles H. Parsons".

Charles H. Parsons  
Acting Environmental Branch Chief  
Environment & Real Estate Branch  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition

cc: Charles McGregor (USACE), letter only  
cc: Amy Heuslein (BIA), letter only



U.S. Customs and  
Border Protection

November 15, 2013

The Honorable Ned Norris, Jr., Chairman  
Tohono O'odham Nation  
Main Street, Building #49  
Sells, AZ 85634

Dear Chairman Norris:

The Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP), Office of Technology Innovation and Acquisition (OTIA) would like to invite the Tohono O'odham Nation to be a cooperating agency for the development of an environmental assessment (EA) for the proposed Integrated Fixed Towers (IFT) within the Chukut Kuk and Gu-Vo District of the Tohono O'odham Nation. CBP has also contacted the Bureau of Indian Affairs (BIA), Papago Agency, and the BIA Western Regional Office to request their participation as cooperating agencies for this undertaking. CBP and BIA have agreed to be cooperative agencies.

On May 9, 2013, the Tohono O'odham Legislative Council passed Resolution #13-142, *Authorizing the U.S. Customs and Border Protection to Conduct Environmental Assessments, and Conduct Pre-Development Activities for the Proposed Integrated Fixed Tower Program in Accordance with the Laws of the Nation and the United States.*

CBP is preparing a National Environmental Policy Act (NEPA) document to adequately identify resource impacts and any potential mitigation to ensure resource protection where necessary. CBP is ultimately responsible for assuring compliance with the requirements of NEPA, the Endangered Species Acts of 1973 as amended, the National Historic Preservation Act of 1966 as amended, and the Archeological and Historical Preservation Act of 1974.

As a cooperating agency, we are requesting that the Tohono O'odham Nation cooperate and provide input, review, and comments in the development of the EA to ensure the document meets the needs of the Tohono O'odham Nation. As the lead Federal agency for this undertaking, CBP will solely be responsible for signing and distributing the final EA and Finding of No Significant Impact (FONSI).

We request that the Tohono O'odham Nation advise OTIA that they have agreed to be a Cooperative Agency and agree to comply with the current schedule (subject to change) for review of our NEPA documents. We can provide you a copy of our current schedule upon request.

Chairman Ned Norris

Page 2

Should you have any additional questions or concerns about this project please contact me at (949) 643-6383 or email at [charles.h.parsons@cbp.dhs.gov](mailto:charles.h.parsons@cbp.dhs.gov). We look forward to working with you on this project.

Sincerely,



Charles H. Parsons, P.G.  
Acting Environmental Branch Chief  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition  
24000 Avila Road, Room 5020  
Laguna Niguel, California 92677

cc:

Bernadette Blackwater, Tohono O'odham Nation  
Karen Howe, Tohono O'odham Nation  
Peter Steere, Tohono O'odham Nation  
Garry Cantley, Bureau of Indian Affairs (BIA)  
Tamera Dawes, BIA  
Amy Heuslein, BIA  
Charles "Chip" Lewis, BIA  
Elizabeth Listo, BIA  
Nina Siquieros, BIA  
Stan Webb, BIA





## Sherry Ethell

---

**From:** Sherry Ethell  
**Sent:** Friday, April 18, 2014 9:27 AM  
**To:** Sherry Ethell  
**Subject:** FW: Comments on Archaeological Report for BP Tower Sites

---

**From:** Peter Steere [<mailto:Peter.Steere@tonation-nsn.gov>]  
**Sent:** Friday, January 17, 2014 10:31 AM  
**To:** PARSONS, CHARLES H ([CHARLES.H.PARSONS@CBP.DHS.GOV](mailto:CHARLES.H.PARSONS@CBP.DHS.GOV))  
**Cc:** Dave Hart  
**Subject:** Comments on Archaeological Report for BP Tower Sites

### MEMORANDUM

**DATE:** January 16, 2014  
**TO:** Charles Parson, Department of Homeland Security  
**FROM:** Peter I. Steere, THPO, Tohono O'odham Nation  
**RE:** Comments on Archaeological Report of USBP Towers on the Tohono O'odham Nation

---

The Tribal Historic Preservation Office of the Tohono O'odham Nation has no additional comments on this report.

We believe all issues have been resolved during discussions of our office with GSRC and during field visits at several times

In the past 6 months.

Issues relating to monitoring during actual construction have all been resolved.



February 7, 2014

Peter Steere  
Tribal Historic Preservation Officer  
Tohono O'odham Nation  
Cultural Center Museum  
Fresnal Canyon Road & BIA Indian Route 19  
Topawa, AZ 85639

FEB 03 2014

RE: Final Cultural Resources Inventory in Support of Integrated Fixed Towers on the Tohono O'odham Nation, U.S. Border Patrol, Tucson Sector, Arizona. Contract Number W9126G-09-D-0067, Delivery Order 0060

Mr. Steere:

Please find enclosed and three (3) hard copies and one (1) electronic copy of the final cultural resources survey report for the proposed Integrated Fixed Towers, as referenced above.

Please do not hesitate to call me at (949) 643-6383 or contact me at [charles.h.parsons@cbp.dhs.gov](mailto:charles.h.parsons@cbp.dhs.gov) if you have any questions, or require additional hard copies of the report.

Sincerely,

A handwritten signature in blue ink that reads "Charles H. Parsons".

Charles H. Parsons, P.G.  
Acting Environmental Branch Chief  
Environment & Real Estate Branch  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition

cc: Charles McGregor

Enclosure



FEB 10 2014

February 7, 2014

Ms. Amy Heuslein  
Bureau of Indian Affairs  
Western Regional Office  
Environmental Quality Services  
2600 North Central Avenue  
4th Floor Mailroom  
Phoenix, AZ 85004-3008

RE: Final Cultural Resources Inventory in Support of Integrated Fixed Towers on the Tohono O'odham Nation, U.S. Border Patrol, Tucson Sector, Arizona. Contract Number W9126G-09-D-0067, Delivery Order 0060

Ms. Heuslein:

Please find enclosed and one (1) hard copy and one (1) electronic copy of the final cultural resources survey report for the proposed Integrated Fixed Towers, as referenced above.

Please do not hesitate to call me at (949) 643-6383 or contact me at [charles.h.parsons@cbp.dhs.gov](mailto:charles.h.parsons@cbp.dhs.gov) if you have any questions, or require additional hard copies of the report.

Sincerely,

A handwritten signature in blue ink that reads "Charles Parsons".

Charles Parsons  
Acting Environmental Branch Chief  
Environment & Real Estate Branch  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition

cc: Garry Cantley  
Charles McGregor

Enclosure



U.S. Customs and  
Border Protection

Mr. Steve Spangle, Field Supervisor  
U.S. Fish and Wildlife Service  
Arizona Ecological Services Field Office  
2321 West Royal Palm Road, Suite 103  
Phoenix, AZ 85021-4915

MAR 05 2014

RE: Proposed Integrated Fixed Towers on the Tohono O'odham Nation in the U.S. Border Patrol's Ajo and Casa Grande Stations' Areas of Responsibility, Tucson Sector, Arizona

Dear Mr. Spangle:

The U.S. Customs and Border Protection (CBP), Office of Technology Innovation and Acquisition (OTIA) is pleased to forward the *Final Biological Assessment for the Proposed Integrated Fixed Towers (IFT) on the Tohono O'odham Nation in the U.S. Border Patrol's (USBP) Ajo and Casa Grande Stations' Areas of Responsibility, U.S. Border Patrol Tucson Sector, Arizona* (hereinafter "Final BA").

OTIA is proposing to construct, operate, and maintain 15 new IFTs; construct one command and control (C2) modular facility; leverage two existing IFTs and one existing C2 facility; construct and maintain 15 access roads (less than 1 mile); and improve, repair, and maintain approximately 80 miles of approach roads. Two staging areas, previously established for construction of the U.S./Mexico border fence, will also be utilized for the Proposed Action.

The Proposed Action is located entirely within Pima County, Arizona. The proposed new IFT sites will be located within the main reservation of the Tohono O'odham Nation. The new C2 modular facility will be located at the San Miguel Law Enforcement Center, which is also on the main reservation of the Tohono O'odham Nation. One existing IFT and the existing C2 facility are located on Federal lands at the USBP Ajo Station. The second existing IFT is located on Bureau of Land Management lands along State Route 85.

The U.S. Fish and Wildlife Service (FWS) currently lists 17 species protected under the Endangered Species Act of 1973, as amended, as occurring in Pima County, Arizona. Of these Federally listed species, two species, the lesser long-nosed bat (*Leptonycteris curasoae*) and the jaguar (*Panthera onca*), have the potential to occur within the range of potential direct or indirect effects resulting from the Proposed Action.

The following six Federally listed species have designated critical habitat in Pima County, Arizona: Huachuca water umbel (*Lilaeopsis schaffneriana* spp. *recurva*), Mexican spotted owl (*Strix occidentalis lucida*), Chiricahua leopard frog (*Lithobates chiricahuensis*), southwestern willow flycatcher (*Empidonax traillii extimus*), desert pupfish (*Cyprinodon macularius*), and Gila chub (*Gila intermedia*). No designated

Mr. Steve Spangle  
Page 2

critical habitat occurs within the range of potential direct or indirect effects resulting from the Proposed Action.

OTIA has determined that the Proposed Action may affect, but is not likely to adversely affect, the lesser long-nosed bat and the jaguar. Supporting evidence for these determinations can be found in the enclosed Final BA. Should the project be modified, additional analysis and surveys may be required to determine the impact on Federally listed species. OTIA has incorporated FWS's recommendations, provided in the correspondence to Mary Hassell, dated July 19, 2013, into the design of the Proposed Action. OTIA respectfully requests FWS's concurrence on its determinations at this time.

Thank you for your assistance in our project planning efforts. If you have any questions, please contact me at (949) 643-6383 or [charles.h.parsons@cbp.dhs.gov](mailto:charles.h.parsons@cbp.dhs.gov).

Sincerely,

A handwritten signature in blue ink that reads "Charles Parsons". The signature is fluid and cursive, with the first name "Charles" and last name "Parsons" clearly distinguishable.

Charles Parsons  
Acting Environmental Branch Chief  
Environment & Real Estate Branch  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition

cc: Garry Cantley , Bureau of Indian Affairs, Western Regional Office  
Charles Lewis, Bureau of Indian Affairs, Western Regional Office  
Karen Howe, Tohono O'odham Nation, Department of Natural Resources

Enclosures



U.S. Customs and  
Border Protection

Honorable Ned Norris, Jr., Chairman  
Tohono O'odham Nation  
Main Street  
Building #9  
Sells, AZ 85634

MAR 05 2014

RE: Final Biological Assessment for the Integrated Fixed Towers on the Tohono O'odham Nation in the Ajo and Casa Grande Stations' Areas of Responsibility, U.S. Border Patrol Tucson Sector, Arizona

Dear Chairman Norris:

The U.S. Customs and Border Protection, Office of Technology Innovation and Acquisition is pleased to forward the *Final Biological Assessment for the Proposed Integrated Fixed Towers on the Tohono O'odham Nation in the U.S. Border Patrol's Ajo and Casa Grande Stations' Areas of Responsibility, U.S. Border Patrol Tucson Sector, Arizona*. Please find enclosed two (2) hard copies and two (2) electronic copies of the report.

Please do not hesitate to call me at (949) 643-6383 or contact me at [charles.h.parsons@cbp.dhs.gov](mailto:charles.h.parsons@cbp.dhs.gov) if you have any questions, or require additional hard copies of the report.

Sincerely,

A handwritten signature in blue ink that reads "Charles Parsons".

Charles Parsons  
Acting Environmental Branch Chief  
Environment & Real Estate Branch  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition

cc: Charles McGregor, USACE  
Karen Howe, Department of Natural Resources

Enclosures



U.S. Customs and  
Border Protection

MAR 05 2014

Mr. Charles Lewis  
Bureau of Indian Affairs – EQS Branch  
2600 N. Central Avenue, 4<sup>th</sup> Floor Mailroom  
Phoenix, AZ 85004

RE: Final Biological Assessment for the Integrated Fixed Towers on the Tohono  
O’odham Nation in the Ajo and Casa Grande Stations’ Areas of Responsibility,  
U.S. Border Patrol Tucson Sector, Arizona

Dear Mr. Lewis:

The U.S. Customs and Border Protection, Office of Technology Innovation and Acquisition is pleased to forward the *Final Biological Assessment for the Proposed Integrated Fixed Towers on the Tohono O’odham Nation in the U.S. Border Patrol’s Ajo and Casa Grande Stations’ Areas of Responsibility, U.S. Border Patrol Tucson Sector, Arizona*. Please find enclosed one (1) hard copy and one (1) electronic copy of the report.

Please do not hesitate to call me at (949) 643-6383 or contact me at [charles.h.parsons@cbp.dhs.gov](mailto:charles.h.parsons@cbp.dhs.gov) if you have any questions, or require additional hard copies of the report.

Sincerely,

A handwritten signature in blue ink that reads "Charles Parsons".

Charles Parsons  
Acting Environmental Branch Chief  
Environment & Real Estate Branch  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition

cc: Charles McGregor, USACE

Enclosures



OFFICE OF THE COMMISSIONER  
UNITED STATES SECTION

INTERNATIONAL BOUNDARY AND WATER COMMISSION  
UNITED STATES AND MEXICO

April 29, 2016

Mr. Paul C. Schmidt  
U.S. Customs & Border Protection (CBP)  
Environmental Planning & Real Estate Branch  
Office of Technology Innovation and Acquisition  
1901 S. Bell St., Suite 600, Mail Stop 1403  
Arlington, Virginia 20598

Dear Mr. Schmidt:

The United States Section, International Boundary and Water Commission (USIBWC) has received the draft Environmental Assessment (EA) for the Integrated Fixed Towers on the Tohono O'odham Nation in the Ajo and Casa Grande Stations' Areas of Responsibility.

The USIBWC had previously commented during the scoping period that the construction should remain outside of the Roosevelt Easement and that there should be no increased flood waters into Mexico as a result of the project.

The maps contained within demonstrate that the towers and buildings do lie outside of the easement, however, the hydrology sections do not demonstrate any diversions of flood flows nor is there reference to any hydrologic studies. For the final EA, please include any study results that detail the effects on the stormwater due to construction activities.

If you have any questions, please feel free to call me at (915) 832-4749 or Mr. Wayne Belzer at (915) 832-4703.

Sincerely

Jose A. Nunez  
Principal Engineer





OFFICE OF THE COMMISSIONER  
UNITED STATES SECTION

INTERNATIONAL BOUNDARY AND WATER COMMISSION  
UNITED STATES AND MEXICO

August 29, 2016

Mr. Wilson Goode  
U.S. Customs & Border Protection  
150 Westpark Way  
Euless, TX 76040

Dear Mr. Goode:

The United States Section of the International Boundary and Water Commission (USIBWC) has completed its review of the U.S. Customs & Border Protection's (CBP) portal application No. 2016-44. The proposed project consists of improvements on eighty-eight (88) low water crossings north of the Roosevelt Easement within the State of Arizona.

The USIBWC does not object to the proposed project provided that the project is performed in accordance with the following understandings:

1. Workers and equipment shall not be allowed to enter into the Republic of Mexico during the construction and maintenance of the project.
2. The project is performed in accordance with the construction documents submitted.
3. Any modifications to the project shall be submitted for review to the USIBWC.
4. The construction phase of the project shall be such that the trans-boundary flows (from US to Mexico and Mexico to US) will not be significantly affected.
5. CBP is responsible for any damage caused to the infrastructure of either country by the construction of said project.
6. CBP is responsible for the replacement and/or repair of said project resulting from flood damage.

In addition to the above, I also make reference to my letter addressed to Mr. Paul C. Schmidt of CBP, dated April 29, 2016, which is enclosed. Within said letter, it was requested that CBP include any study results that detail the effects on the stormwater due to construction activities in the final Environmental Assessment. That request has been fulfilled with the documentation that was submitted within the above application and therefore, the USIBWC has no further issues.

If you have any questions, please feel free to contact Mr. Samuel Vasquez, Boundary & Realty Officer, at (915) 832-4156 or via e-mail at [samuel.vasquez@ibwc.gov](mailto:samuel.vasquez@ibwc.gov).

Sincerely,

Jose A. Nuñez, P.E.  
Principal Engineer

Enclosure(s):  
As stated



**TOHONO O'ODHAM NATION**  
**CULTURAL AFFAIRS PROGRAM**  
P.O. BOX 837 • SELLS, ARIZONA 85634  
Telephone (520) 383-3622 • Fax (520) 383-3377



**MEMORANDUM**

**DATE:** February 15, 2017

**TO:** Rafael Castillo, U.S. Border Patrol, Tucson Sector

**CC:** Marlakay Henry, Director, Natural Resources  
Michael Ellerman, Attorney for Tohono O'odham Legislative Council  
Rosalynde Alexander, Assistant Attorney General, Tohono O'odham Nation

**FROM:** Peter L. Steere, THPO, Tohono O'odham Nation *DLS*

**RE:** Cultural Resource Conditions for USBP IFT Project

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**GENERAL CONDITIONS**

1. Each tower site should be staked and flagged before construction to keep contractor working only in approved area
2. There should be tribal monitors onsite during construction at tower sites and road work.
3. Each low water crossing where road may be widened from existing ROW will require tribal monitors.
4. Cultural Affairs Office should be invited to pre-construction meeting to brief contractor
5. No road widening will be permitted when it passes through a cultural resource site (all of the access road have already been surveyed so we know where sites are

located)When an access road to a tower site passes through a cultural site the road cannot be widened nor can it be graded

6. When an access road passes through a cultural resource site – the boundaries of the site need to be flagged so the contractor vehicles know they are passing through site and not to leave access road
7. If inadvertent discoveries of surface or buried cultural resource sare made during construction, work at that location must stop and the Cultural Affairs Office be contacted to evaluate discovery
8. When road maintenance and repair is needed within 0.25 miles of any cultural sites, CBP will contract for an archaeologist to be present during the proposed maintenance activity. CBP will also provide for funding for a tribal monitor.
9. The archaeologist shall flag the cultural resource boundary providing a 10 m buffer around the mapped perimeter of the site where the site intersects the road and ensure that no maintenance activities occur within the flagged boundaries of the site.
10. The archaeologist, the tribal monitor and staff from the Cultural Affairs Office will provide a training session for the tower contractor and the road maintenance contractor regarding how to minimize potential impacts to cultural sites
11. If subsurface cultural materials are encountered during ground – disturbing activities, work activities at that site will cease within a 100 ft buffer, the Cultural Affairs Office will be contacted nand the archaeologist onsite will take measures to protect the cultural resources
12. In any situation where road maintenance is required within the road bed across a site, the road will be repaired by the import of materials to restore the road surface and provide proper drainage across the site.
13. CBP will provide notification to the Tohono O’odham Tribal Historic Preservation Office at least 10 days in advance to executing maintenance and repair activities.

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**SPECIFIC CONDITIONS FOR EACH IFT SITE (See Attachment 1)**

██████████ - No cultural sites present

██████████ – No cultural sites present

██████████ – No cultural sites present

██████████ – no cultural sites present

██████████ – Field site 502-artifact scatter – avoid, monitor, geophysical study

██████████ – Approach road - No cultural sites

██████████ – no cultural sites

██████████ – Approach road – FS 401 – lithic scatter/thermal feature - avoid, monitor

██████████ – no cultural sites

██████████ – approach road – no cultural sites

██████████ – Field site 503 – artifact scatter-thermal feature – avoid, monitor, geophysical study

██████████ – Approach road – Field site 504 – artifact scatter – avoid, monitor

██████████ – no cultural sites

██████████ – Approach road - Site SN C:2:58(ASM)-village site - avoid, monitor

██████████ – Field site 600-artifact scatter – avoid, monitor, geophysical study

██████████ – Approach road – Site SN C:3:16(ASM) artifact scatter and Site SN C:7:7 (ASM)-historic habitation camp – avoid and monitor

██████████ – no cultural sites

██████████ – Approach road – no cultural sites

██████████ – no cultural sites

██████████ – Approach road –Field site-6-village, Site TO:CK:14 – artifact scatter, Field site 102-artifact scatter and thermal feature, Field site 101-artifact scatter and thermal features, Field site 7 – artifact scatter and thermal features, Site TO:CK:16 – artifacts scatter, habitation – avoid and monitor

██████████ – no cultural sites

[REDACTED] - Approach road – Site TO:CK:17-Toro’s Ranch, Field site C1-artifact scatter, Site SN C:8:7(ASM) – artifact scatter and features, Site SN C:8:6(ASM)-artifact scatter and thermal feature, AZ DD:5:40(ASM)- ceramic scatter – avoid and monitor

[REDACTED] - Field site 1 – village – avoid, monitor, geophysical study

[REDACTED] - Approach road- Field site 2-village, AZ DD:5:39(ASM)-artifact scatter and thermal feature, AZ DD:5:38(ASM)-Enos Hendricks line camp, AZ DD:5:37(ASM) –ceramic scatter – avoid and monitor

[REDACTED] - Site AZ DD:5:47(ASM)-avoid, monitor, geophysical study

[REDACTED] - Approach road – AZ DD:5:46(ASM)-artifact scatter and thermal feature, AZ DD:5:45(ASM)-artifact scatter and thermal feature – avoid and monitor

[REDACTED] - no cultural sites

[REDACTED] -Approach road – no cultural sites

[REDACTED] -no cultural sites

[REDACTED] -Approach road-Field site B1-artifact scatter, AZ DD:5:34(ASM)-trash mound and artifact scatter, AZ DD:5:33(ASM)-artifact scatter, AZ DD:5:32(ASM)-trash mound and artifact scatter, AZ DD:5:41(ASM)-Border Monument 145, AZ DD:5:28(ASM)-rock feature and artifact scatter – avoid and monitor

[REDACTED] -no cultural sites, no approach road

[REDACTED] -no cultural sites

[REDACTED] -Approach road – AZ DD:5:29(ASM)-artifact scatter, AZ DD:5:27(ASM)-artifact scatter, AZ DD:5:6:51(ASM)-artifact scatter, AZ DD:5:6:52(ASM)-artifact scatter, AZ DD:6:30(ASM)-border monument – avoid and monitor

**Attachment 1. Proposed IFT, Access Road, Approach Road Locations, and Cultural Resources**

Tower No.	Common Name	Archaeological Sites and Types	Reference	Recommendations
[REDACTED]	[REDACTED]	None	CBP 2009	None
		None	CBP 2009	None
		None	Hart 2014	None
		None	Hart 2014	None
		FS 502 – artifact scatter	Hart 2014	Avoidance, monitoring, Geophysical study†
		None	Hart 2014	None
		None	Hart 2014	None
		FS 401 – lithic scatter, thermal feature	Hart 2014	Avoidance, monitoring
		None	Hart 2014	None
		N.A	Hart 2014	None
		FS 503 – Thermal features, artifact scatter	Hart 2014	Avoidance, monitoring, Geophysical study
		FS 504 – artifact scatter	Hart 2014	Avoidance, monitoring
		N/A	Hart 2014	None
		SN C:2:58(ASM)‡‡ – village site	Hart 2014, Hart and Lindemuth 2006, HDR 2015, Martynec et al. 1995.	Avoidance, monitoring
		FS 600 – Artifact scatter	Hart 2014	Avoidance, monitoring, Geophysical study
		SN C:3:16(ASM) – artifact scatter; SN C:7:7(ASM) – historic habitation/camp	Hart 2014, Hart and Lindemuth 2006, HDR 2015, Martynec et al. 1995.	Avoidance, monitoring
None	Hart 2014	None		

Tower No.	Common Name	Archaeological Sites and Types	Reference	Recommendations
		N/A	Hart 2014	None
		None	Hart 2014	None
		FS 6 – village; TO:CK:14 – artifact scatter /habitation; FS 102 – artifact scatter, thermal feature; FS 101 – Artifact scatter, thermal features; FS 7 – artifact scatter with thermal features; TO:CK:16 – Artifact scatter/habitation	Deaver et al. 2011, Hart 2014	Avoidance, monitoring
		None	Hart 2104	None
		TO:CK:17 –Toro’s Ranch; FS CI – artifact scatter; SN C:8:7(ASM) – artifact scatter and features; SN C:8:6(ASM) – artifact scatter and thermal feature; AZ DD:5:40(ASM) – ceramic scatter	Deaver et al. 2011, Hart 2014, Hart and Lindemuth 2006, Martynec et al. 1995.	Avoidance, monitoring
		FS 1 – village	Hart 2014	Avoidance, monitoring, Geophysical study
		FS 2 – village; AZ DD:5:39(ASM) – artifact scatter, thermal feature; AZ DD:5:38(ASM) – Enos Hendricks line camp; AZ DD:5:37(ASM) – ceramic scatter	Hart 2014, Hart and Lindemuth 2006, Martynec et al. 1995.	Avoidance, monitoring
		AZ DD:5:47(ASM) – village	Hart 2014, Hart and Lindemuth 2006, Martynec et al. 1995.	Avoidance, monitoring, Geophysical study

Tower No.	Common Name	Archaeological Sites and Types	Reference	Recommendations
		AZ DD:5:46(ASM) – artifact scatter, thermal feature, AZ DD:5:45(ASM) – artifact scatter, thermal feature	Hart 2014, Hart and Lindemuth 2006, Martynec et al. 1995.	Avoidance, monitoring
		None	Hart 2014	None
		None	Hart 2014	None
		None	Hart 2014	None
		FS B1 – artifact scatter; AZ DD:5:34(ASM) – trash mound, artifact scatter; AZ DD:5:33(ASM) – artifact scatter; AZ DD:5:32(ASM) – Trash mound and artifact scatter; AZ DD:5:41 – Border Monument 145, AZ DD:5:28(ASM) – rock feature, artifact scatter	Hart 2014, Hart and Lindemuth 2006, Martynec et al. 1995.	Avoidance, monitoring
		None	Hart 2014	None
		None	Hart 2014	None
		None	Hart 2014	None
		AZ DD:5:29(ASM) – artifact scatter; AZ DD:5:27(ASM) – artifact scatter; AZ DD:6:51(ASM) – artifact scatter; AZ DD:6:52(ASM) – artifact scatter; AZ DD:6:30(ASM) – border monument	Hart 2014, Hart and Lindemuth 2006, Martynec et al. 1995.	Avoidance, monitoring

\* The existing towers, TCA-AJO-0216 and TCA-AJO-0305, and the C2 facility were surveyed as part of the Ajo IFT EA (CBP 2009), are located on Federal lands, and are not evaluated as part of the current investigation beyond this table and the overview map.

† Geophysical study = Ground-penetrating radar or a magnetometer

‡ Alternate location to preferred [REDACTED]

‡‡ This site was updated to incorporate the previously recorded SN C:2:58(ASM) and SN C:2:64(ASM) into one site.





# United States Department of the Interior

Fish and Wildlife Service  
Arizona Ecological Services Office

9828 North 31<sup>st</sup> Avenue  
Phoenix, Arizona 85051

Telephone: (602) 242-0210 Fax: (602) 242-2513



AESO/SE  
02EAAZ00-2017-I-0251

March 17, 2017

Mr. Paul C. Schmidt  
Manager  
Environmental Planning and Real Estate Section  
Office of Acquisition  
U.S. Customs and Border Protection  
Department of Homeland Security  
1901 S. Bell Street, Suite 600  
Arlington, Virginia 20598

Dear Mr. Schmidt:

**Subject: Informal Consultation on Customs and Border Protection's Integrated Fixed Tower Project on the Tohono O'odham Nation, Pima County, Arizona**

Thank you for your correspondence (letter in response to our request for more information) of January 18, 2017, received that same date. This letter documents our review of Customs and Border Protection's Integrated Fixed Tower Project on the Tohono O'odham Nation in Pima County, in compliance with section 7 of the Endangered Species Act of 1973 (ESA) as amended (16 U.S.C. 1531 *et seq.*). Your letter concluded that the proposed project may affect, but is not likely to adversely affect the endangered Sonoran pronghorn (*Antilocapra americana sonoriensis*); endangered jaguar (*Panthera onca*) and its critical habitat; endangered lesser long-nosed bat (*Leptonycteris curasoae yerbabuena*), and threatened western distinct population segment of the yellow-billed cuckoo (*Coccyzus americanus*) and its proposed critical habitat. We concur with your determinations and provide our rationales below.

## Description of the Proposed Action

A summary of the proposed action is included below; however, a complete description of the proposed action is found in the 1) March 2016 Revised Final Biological Assessment (BA) for Integrated Fixed Towers on the Tohono O'odham Nation in the Ajo and Casa Grande Stations' Areas of Responsibility, U.S. Customs and Border Protection, Department of Homeland Security; 2) October 12, 2016 letter from Customs and Border Protection (CBP) to the U.S. Fish

and Wildlife Service (FWS); 3) January 18, 2017 letter from CBP to FWS; and 4) emails exchanged between CBP and FWS. CBP proposes to construct, operate, and maintain 15 new Integrated Fixed Tower (IFT) sites (Figure 1) and the retrofit of two existing communication towers and two command and control (C2) facilities. The Proposed Action also includes the construction of 14 access roads (up to 0.24 mile total) and the improvement of up to 70.90 miles total of approach roads (Figure 1). Future maintenance and repair of these roads will be conducted under CBP's Arizona Tactical Infrastructure Maintenance and Repair Program (TIMR). In addition, two staging areas previously established for the construction of the U.S./Mexico border fence will be utilized to support construction and related activities. IFTs will be able to communicate with the Ajo or Casa Grande Border Patrol Stations and will provide an overall network system of communications and surveillance along 63 miles of the U.S./Mexico Border. As such, Border Patrol operations associated with the IFT project on the Nation are also a part of the proposed action.

### *Summary of Towers and Associated Infrastructure*

CBP will construct 15 towers fitted with sensor and communications equipment along the southern and southwestern border of the Tohono O'odham Nation (Figure 1). The tower structure is a self-standing tower (SST) that will not require guy wires and will not extend greater than 180 feet above ground level. The typical permanent tower site is 50 feet wide by 50 feet long, but will not exceed 160 feet wide by 160 feet long. Temporary construction areas for the tower sites are typically 100 feet wide by 100 feet long, surrounding the permanent tower site, but would not exceed 200 feet wide by 200 feet long. Staging of construction equipment and materials, as necessary, will occur within the temporary construction area. Regardless of each tower site's configuration, the total area of permanent disturbance would not exceed 0.59 acres (100'x100' plus a 30' fire buffer); and the temporary construction disturbance for each site would be 0.33 acres. The total permanent and temporary disturbance areas for all tower sites are estimated to be up to **8.23 acres** and **4.63 acres** respectively. TCA-AJO-216, TCA32-AJO-305, and TCA-CAG-0432 are not included in this estimate because their disturbance areas will be confined to the footprint of existing CBP-operated facilities.

Towers will include perimeter security fences; each will encompass an area up to 10,000 square feet at each tower site, depending on tower site configuration. These fences will typically consist of a 7-foot-high chain-link fence and a 1-foot barbed wire outrigger. Each IFT will be powered by either commercial grid power (where available) with a backup propane generator or a dual power system consisting of a propane generator and alternate power source with charged batteries. Fiber-optic communication services may be installed within the existing C2 facility at the San Miguel LEC and at IFTs TCA-CAG-0432, TCA-AJO-0452, and TCA-AJO-0454. Fiber-optic cables would be buried from the main line to the tower site shelter within surveyed road construction buffer areas.

U.S. Fish and Wildlife Service's Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers and Recommendations for Design and Construction of Cell Phone and Other Towers will be implemented to include actions to reduce nighttime atmospheric lighting and the potential adverse effects of nighttime lighting on migratory bird and nocturnal flying species. The proposed tower sites may be lighted for

security purposes. Security lighting may consist of a “porch light” on the tower shelter controlled by a motion detector. When so equipped, the light would be shielded to avoid illumination outside the footprint of the tower site.

#### *Summary of Project Construction and Testing*

Heavy equipment (e.g., front-end loader, drill rig, bulldozer, crane) and vehicles (e.g., dump trucks, crew trucks, delivery trucks) will be required to construct the towers. The temporary construction area, which will be around the permanent tower site footprint, may be cleared but will not be graded. The temporary construction area will be used for parking construction vehicles and staging construction equipment and materials during construction activities. Following construction activities, temporary impact areas will be revegetated with a mixture of native plant seeds, nursery plantings, and/or allowed to revegetate naturally. Two main staging areas, located in previously disturbed areas, will also be utilized for the storage of equipment and materials.

Project construction and testing (including tower site and road preparation, tower construction and technology installation, and equipment testing and system acceptance testing) will take about 24 months and may begin in November 2017. Based on past experience, it is anticipated that testing may require personnel to drive vehicles, ride horses, fly ultralight aircraft, and/or walk multiple routes near different IFTs for a 2- to 3-hour period either individually or as a group. All testing vehicles will travel on existing roads. Testing will occur during an approximately 28-day period for all tower sites.

#### *Summary of Tower Operation and Maintenance*

Operation of the towers will include propane backup generators one hour per day. The purpose for the daily one hour run is to charge the backup batteries. Tower site maintenance includes scheduled and unscheduled maintenance. Scheduled maintenance includes any planned preventive maintenance, clearing vegetation within the permanent tower site footprint and clearing combustibles within the fire buffer. Unscheduled maintenance includes removing and replacing failed tower sensor systems or shelter components. Both scheduled and unscheduled tower maintenance require maintenance vehicles to travel to and from the IFT sites. The number of maintenance and refueling trips varies depending on tower function (i.e., sensor) and power type (i.e., commercial grid power) (see Table 1-2 in the BA). For 14 towers, a cumulative total of approximately 416 vehicle trips per year are anticipated for tower maintenance and refueling. The 15<sup>th</sup> tower is located at the San Miguel Law Enforcement Center and therefore requires no new trips for maintenance and refueling.

#### *Summary of Roadwork*

CBP will construct access roads and improve approach roads to move equipment, materials, and personnel to and from the tower sites during construction, maintenance, and operation of the tower sites. Approach roads are existing private or public roads used to travel to a tower site. Access roads are short road segments from an approach road into a tower site. All approach and access roads requiring roadwork are located on the Tohono O’odham Nation.

As part of the proposed project, no improvements to the Traditional Northern Road through or near Vamori Wash will occur. Any future improvements will be analyzed under a separate section 7 consultation. Routine maintenance of the Traditional Northern Road is covered under the 2016 Biological Opinion for TIMR.

#### Access Road Construction

Fourteen new access roads will be constructed prior to and during tower construction to provide access to IFT sites from approach roads. The average length of an access road will be about 0.02 miles (84 feet). The total length of all access roads combined will be less than 1 mile (currently estimated at up to 0.24 mile). Each access road will have a 12- to 20-foot-wide driving surface depending on terrain. Construction equipment will stay within the temporary construction areas for the access roads and tower sites. CBP and CBP contractors will assess the need for road surfacing, including the need for aggregate or surface stabilizer and drainage structures, which could prevent adverse impacts on roads, drainages, and adjacent areas. Drainage structures include, but are not limited to, ditches, culverts, and low-water crossings. Construction of access roads will result in up to **0.57** acre of permanent impacts and up to **1.43** acres of temporary impacts. To minimize potential erosion, temporary impact areas will be revegetated with a mixture of native plant seeds, nursery plantings, and/or allowed to revegetate naturally.

#### Approach Road Improvements

Up to **70.90** miles of existing approach roads will be improved prior to and during tower construction (see Appendix A in the BA; however, no improvements will be made to the Traditional Northern Road through or near Vamori Wash). All approach roads will be improved to have a driving surface of up to 12- to 16-foot wide with a 2-foot shoulder on each side of the road. Approach roads will be improved to the design standard for an all-weather road, a graded earth road, or a hybrid of the two. Road resurfacing, including aggregate or surface stabilizers, may be required to prevent adverse impacts on roads, drainages, and adjacent areas or resources.

Improvements may include reconstructing, widening, realigning, or straightening the existing road and/or installing ditches, turnouts, guardrails, or erosion protection, such as riprap and gabion headwalls. In addition, approach roadwork will include installing a low water crossing or culvert within approximately 195 ephemeral washes. Road improvements will require a permanent 30-, 50-, 70-, or 100-foot wide disturbance area depending on design and safety requirements. Assuming an existing road width of 20 feet wide, up to 178.33 acres of existing approach roads would be improved and up to **214.20** acres of previously undisturbed land outside the current width of the existing approach roads would be permanently disturbed for approach road improvements.

#### Road Maintenance and Repair

Road maintenance and repair will include minor grading, leveling, re-sheeting, or rebuilding of approach and access roads and installing drainage structures. Road maintenance and repair will occur within approximately 214 ephemeral washes. It is anticipated that road maintenance and repair may occur up to six times per year, as necessary. To minimize potential erosion, any

temporary impact areas will be revegetated with a mixture of native plant seeds, nursery plantings, and/or allowed to revegetate naturally. Road maintenance and repair of the approximately 72 miles of access and approach roads will be conducted under TIMR. If the addition of the new roads affects listed species or critical habitat in a manner or to an extent not considered in the 2016 TIMR biological opinion, CBP will reinstate consultation per 50 CFR 402.16.

### *Border Patrol Operations Associated with the TON IFTs and Border Traffic Trends*

The deployment of towers on the Tohono O'odham Nation will affect the border traffic trends and the deployment of Border Patrol assets on the Tohono O'odham Nation. Based on deployments of technology in other areas, Border Patrol anticipates that after deployment of IFTs on the Tohono O'odham Nation, an increase in apprehensions will occur for the first couple of years until the traffic in the area becomes controlled. This should be followed by a decrease in entries, incursions, apprehensions, and off-road activity.

### *Patrol Activities and Apprehensions*

After the IFTs are operational, it is anticipated that there will be 1) a reduction in the amount of Border Patrol effort dedicated to specific areas; 2) a decrease in patrol activity north of the border (however, patrols, dragging, and cutting for sign along the border will still occur); and 3) a decrease in off-road incursions as the IFTs will allow agents to conduct apprehensions by driving along authorized roadways and then parking and walking into areas without roads to apprehend people (however, agents will still need to respond to emergency situations which may require off-road vehicle use). Decreased efforts in some areas, decreased patrol activity north of the border, and decreased off-road driving to conduct apprehensions should reduce Border Patrol's impacts to natural resources north of the border when compared to the current situation.

After the deployment of IFTs, patrol activities will continue in the form of agents deployed to the field in vehicles and by foot. Air assets and support will continue to patrol throughout Tucson Sector as a whole dependent on their flight time availability. Horse patrol and ATV units will continue to patrol areas on the Nation as needed; these units are used specifically as enhancements to regular patrol shifts. Future frequency of patrol activities is unknown and will be dictated by illegal activity. In regard to timing of patrol activities, generally, more take place during night time hours.

On the Nation, Border Patrol currently deploys under-ground surveillance (known as UGS) and has two FOBs, one tactical checkpoint on Federal Route 15, and one drag road (i.e., the border road). These assets and activities will continue after the deployment of the IFT project. Mobile and handheld technology is also deployed but its use will be reevaluated once the IFT Project is deployed on the Nation.

### *Shifts in Traffic*

Border Patrol expects a decrease in entries and apprehensions to occur on the Nation after deployment of the IFTs and cannot predict where Cross-Border Violator (CBV) traffic will shift

and which areas of Arizona will see the increase from the deployment of the towers on the Nation. However, Border Patrol will provide a quarterly analysis to FWS to report possible shifts and increases of CBVs in the Tucson Sector area of responsibility (primarily within the “west corridor” which includes the Baboquivari Mountains and areas west to the Pima/Yuma County line area). If the Border Patrol detects an increase in CBVs on the CPNWR, the Border Patrol will coordinate with the Refuge Manager and CPNWR Law Enforcement to address the matter as soon as possible in a manner that minimizes potential risk to Sonoran pronghorn and other sensitive resources on the CPNWR. Addressing increases in traffic deploying additional agents to the Boundary FOB, air assets or ATV units, and mobile technology to that area until the traffic is addressed. The increased traffic would primarily be addressed close to the international boundary, thereby minimizing the effects on the pronghorn population. CBP believes the long-term solution for addressing traffic on CPNWR is fixed technology in those specific areas experiencing increased traffic. CBP surveillance technology assets east of the Baboquivari Mountains are in place and provide Border Patrol effective technology assets in the areas east of the Nation to the AZ/NM border enabling Border Patrol to respond quickly to CBVs.

### *Reporting*

#### **IFT Tower Construction Reporting**

The Tohono O’odham Nation’s Department of Natural Resources and Wildlife and Vegetation Management Program (NRWV) and FWS will be kept informed by USBP by email on milestones of the project as it progresses through the construction stage. If any issues occur with relevance to listed species or critical habitat, such as with the BMPs or timing of tower deployments, we will advise and coordinate with the NRWV and FWS. At the conclusion of the project, a formal letter will be sent to NRWV and FWS showing a summary of the project.

#### **Border Patrol Operations Reporting**

Border Patrol will hold meetings to report to the FWS and the Tohono O’odham, including the NRWV, on the status of border traffic trends and Border Patrol response. Specifically, these meetings will show pre- and post statistics of apprehensions and seizures on the Nation and nearby areas (e.g. OPCNM, CPNWR, Altar Valley/BANWR) to statistically describe the effectiveness of the Nation’s IFT Project. Meetings will begin before the towers are online, with the first meeting to be held three months after the BIA Right of Way is signed. For the first three years after the IFTs are online (i.e., acceptance of the towers by the government), CBP will report to the FWS and NRWV quarterly. In year 4, CBP will report biannually, and in year 5, CBP will report once.

#### ***Summary of Best Management Practices (BMPs)***

Many BMPs are included in the project description of the BA to minimize impacts to natural and cultural resources. BMPs specific to the species addressed in this consultation are included below.

### Sonoran Pronghorn

1. Notify the Tohono O'odham Nation WVMP if a Sonoran pronghorn is observed within or near the project area during construction-related activities, decrease vehicle speeds to 10 to 15 mph until the vehicle or animal safely passes. Suspend construction activities and wait for Sonoran pronghorn to relocate if Sonoran pronghorn are observed in proximity to the tower sites during tower construction.

### Lesser Long-nosed Bat

1. No tower construction will take place within 0.5 mile of an occupied lesser long-nosed bat roost from mid-April through early November without prior discussion with FWS.
2. The following BMPs from the 2012 TIMR BO will be implemented for tower and road maintenance and repair (Note: The dates in which lesser long-nosed bats are known to occupy areas on Tohono O'odham Nation have been extended to mid-April to early November. The 2012 TIMR BO includes the date range of mid-April to mid-September; however, the new date range supersedes this for both the Tower and TIMR projects on the Nation):
  - a. Removal of columnar cacti (i.e., saguaro and organ pipe) and agave will be limited to the minimum necessary to maintain drivable access roads and to maintain the functionality of other tactical infrastructure. Prior to conducting any maintenance or repair activity outside of the existing disturbed footprint of tactical infrastructure within the range of this species, a qualified biologist will conduct a survey to identify and flag all columnar cactus (i.e., saguaro and organ pipe) and agave to be avoided.
  - b. No maintenance and repair activities will be conducted within 0.5 miles of any known lesser long-nosed bat roost from mid-April through early November. FWS will provide CBP with an updated list and maps of known lesser long-nosed bat roosts.
  - c. For maintenance and repair activities that will take place greater than 0.5 miles and less than 5 miles from any known lesser long-nosed bat roost, limit activities to daylight hours, from mid-April through early November only, to avoid effects on bats in bat roosts. If night lighting is unavoidable: (1) minimize the number of lights used; (2) place lights on poles such that they are pointed down toward the ground, with shields on lights to prevent light from going up into sky, or out laterally into landscape; and (3) selectively place lights so they are directed away from native vegetation.

### Yellow-billed Cuckoo

1. CBP will contact FWS and the Tohono O'odham Nation for updated maps of known yellow-billed cuckoo breeding and foraging areas prior to implementing the action.

## DETERMINATION OF EFFECTS

We concur with your determination that the proposed action may affect, but is not likely to adversely affect the Sonoran pronghorn; jaguar and its critical habitat; lesser long-nosed bat, and yellow-billed cuckoo and its proposed critical habitat. Our rationales are provided below.

### Sonoran pronghorn

- The action area for the proposed project is outside of the range of the endangered Sonoran pronghorn. Therefore, effects to endangered Sonoran pronghorn in the form of disturbance from project construction, operation, and maintenance are discountable.
- Border Patrol cannot predict with reasonable certainty if or where an increase in border traffic and subsequent Border Patrol response will occur as a result of the proposed action. Therefore, effects to endangered Sonoran pronghorn in the form of disturbance and habitat degradation from shifting Border Patrol operations (for example, west of the proposed project on Organ Pipe Cactus National Monument and Cabeza Prieta National Wildlife Refuge, both key areas for the recovery of Sonoran pronghorn) are discountable.

### Jaguar and critical habitat

- Because the proposed project footprint is outside of jaguar critical habitat (see Figures 2-2 and 3-1 in the BA), the likelihood of any direct or indirect interaction between the proposed action and primary constituent elements is extremely low. Therefore, any effects to critical habitat are assumed to be discountable.
- It is unlikely that jaguars occur in the action area of the proposed project based on habitat availability. Therefore, effects to jaguars in the form of disturbance from project construction, operation, and maintenance are discountable.
- While we do not know the extent of the area in which Border Patrol operations associated with the towers will occur; based on the location and likely viewshed of the towers it is assumed that operations will occur to the west of the range of jaguars. Therefore, effects to jaguars in the form of disturbance and habitat degradation from Border Patrol operations are discountable.
- Border Patrol cannot predict with reasonable certainty if or where an increase in border traffic and subsequent Border Patrol response will occur as a result of the proposed action. Therefore, effects to jaguars in the form of disturbance and habitat degradation from shifting Border Patrol operations (for example, just east of the proposed project in the Baboquivari Mountains where jaguars have been documented) are discountable.

### Lesser long-nosed bat

- Project construction, maintenance, and repair will not be conducted within 0.5 mile of any lesser long-nosed bat roost from mid-April through early November (the season



when lesser long-nosed bats are present in the action area). Therefore, effects in the form of disturbance to roosting bats from project construction, maintenance, and repair activities are discountable.

- Project construction will be conducted during the day. Therefore, effects in the form of disturbance to foraging bats from project construction are discountable.
- No lesser long-nosed bat roosts occur within the project footprint. Therefore, effects to lesser long-nosed bats in the form of roost destruction or modification from project construction, operation, maintenance, and repair activities are discountable.
- Per the BA, a maximum of five columnar cacti (bat forage plants) will be impacted by the project (these will be relocated or replaced at a 3:1 ratio). Therefore, effects to lesser long-nosed bats in the form of loss of forage plants are insignificant.
- BMPs will minimize the amount of lighting and noise associated with operation of the towers. Therefore, effects to bats in the form of noise and auditory disturbance from tower operation are insignificant.
- Five years of bat carcass surveys associated with other CBP tower projects near lesser long-nosed bats roosts revealed no injury or mortality to bats (from tower strikes). Therefore, effects to flying/foraging bats in the form injury from colliding with towers are discountable.
- While we do not know the extent of the area in which Border Patrol operations associated with the towers will occur; based on the location and likely viewshed of the towers it is assumed that operations will not occur near lesser long-nosed bat roosts. Therefore, effects to lesser long-nosed bats in the form of roost disturbance and degradation from Border Patrol operations are discountable.
- Except in emergency circumstances, Border Patrol vehicle patrol and interdiction activities will occur on authorized roads. Therefore, effects to lesser long-nosed bat in the form of loss of forage plants from off-road vehicle activity are insignificant.
- Border Patrol cannot predict with reasonable certainty if or where an increase in border traffic and subsequent Border Patrol response will occur as a result of the proposed action. Therefore, effects to lesser long-nosed bats in the form of disturbance and habitat degradation from shifting Border Patrol operations (for example, to the Ajo Mountains where a lesser long-nosed bat roost site occurs) are discountable.

#### Yellow-billed cuckoo and proposed critical habitat

- Because the proposed project footprint is outside of proposed yellow-billed cuckoo critical habitat (see Figure 2-1 in the BA), the likelihood of any direct or indirect interaction between the proposed action and primary constituent elements is extremely low. Therefore, any effects to critical habitat are assumed to be discountable.

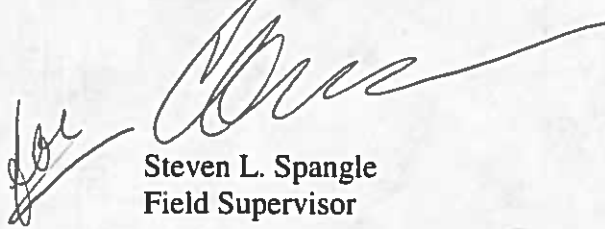
- With the exception of where the Traditional Northern Road crosses the Vamori Wash (note that improvements to this section of the road will be analyzed under a separate section 7 consultation; and maintenance of the road is covered under the 2016 TIMR biological opinion), the proposed project is outside of yellow-billed cuckoo habitat (based on maps in the BA [see Figure 12 in the BA], the closest proposed tower, TCA-CAG-0432, to Vamori Wash is about 1 kilometer). Therefore, effects to yellow-billed cuckoos in the form of disturbance from project construction, operation, maintenance, and repair that are above the baseline of existing disturbance and activities on these roadways and that result from the proposed action are discountable.
- Except in emergency circumstances, Border Patrol vehicle patrol and interdiction activities will occur on authorized roads and will not significantly add to the baseline of existing disturbance and use of these roadways. Therefore, effects to yellow-billed cuckoos in the form of disturbance or habitat degradation resulting from the proposed action are insignificant.
- Border Patrol cannot predict with reasonable certainty if or where an increase in border traffic and subsequent Border Patrol response will occur as a result of the proposed action. Therefore, effects to yellow-billed cuckoos in the form of disturbance and habitat degradation from shifting Border Patrol operations (for example, in the Vamori Wash where yellow-billed cuckoos have been documented) are discountable.

Thank you for your continued coordination. No further section 7 consultation is required for this project at this time. Should project plans change, or if information on the distribution or abundance of listed species or critical habitat becomes available, this determination may need to be reconsidered. After the towers are operational, if Border Patrol detects increases in border traffic to the east (i.e., in the Baboquivari Mountains), west (i.e., Organ Pipe Cactus National Monument or Cabeza Prieta National Wildlife Refuge, or within habitat of listed species on the Nation (e.g., in washes occupied by yellow-billed cuckoos), CBP should coordinate with the FWS to determine if further section 7 consultation is required to analyze impacts of the project not considered in this concurrence. Furthermore, we strongly encourage CBP to conduct section 7 consultation in a comprehensive manner for all Border Patrol Operations in the Tucson Sector. As you are aware, CBP currently has limited coverage under section 7 for incidental take of listed species associated with Border Patrol operations.

Because we have very limited data related to the occupancy and use of the Nation by yellow-billed cuckoos, especially during the breeding season, gathering such information is extremely helpful to conservation of the species and allows us more flexibility as we evaluate projects in the future. Given the ongoing CBP operations on the Nation in the vicinity of the border, we recommend that CBP provide resources to implement ongoing yellow-billed cuckoo surveys in the xeroriparian drainages in the border area of the Nation. The FWS would be very appreciative of such data and is willing to provide technical assistance to develop and implement such surveys. Please contact if we can be of assistance in this issue.

In all future correspondence on this project, please refer to the consultation number 02EAAZ00-2016-I-0172. We also encourage you to coordinate the review of this project with the Arizona Game and Fish Department. Should you require further assistance or if you have any questions, please contact Erin Fernandez (520) 670-6150 (x238) or Scott Richardson (x242).

Sincerely,



Steven L. Spangle  
Field Supervisor

cc (hard copy):

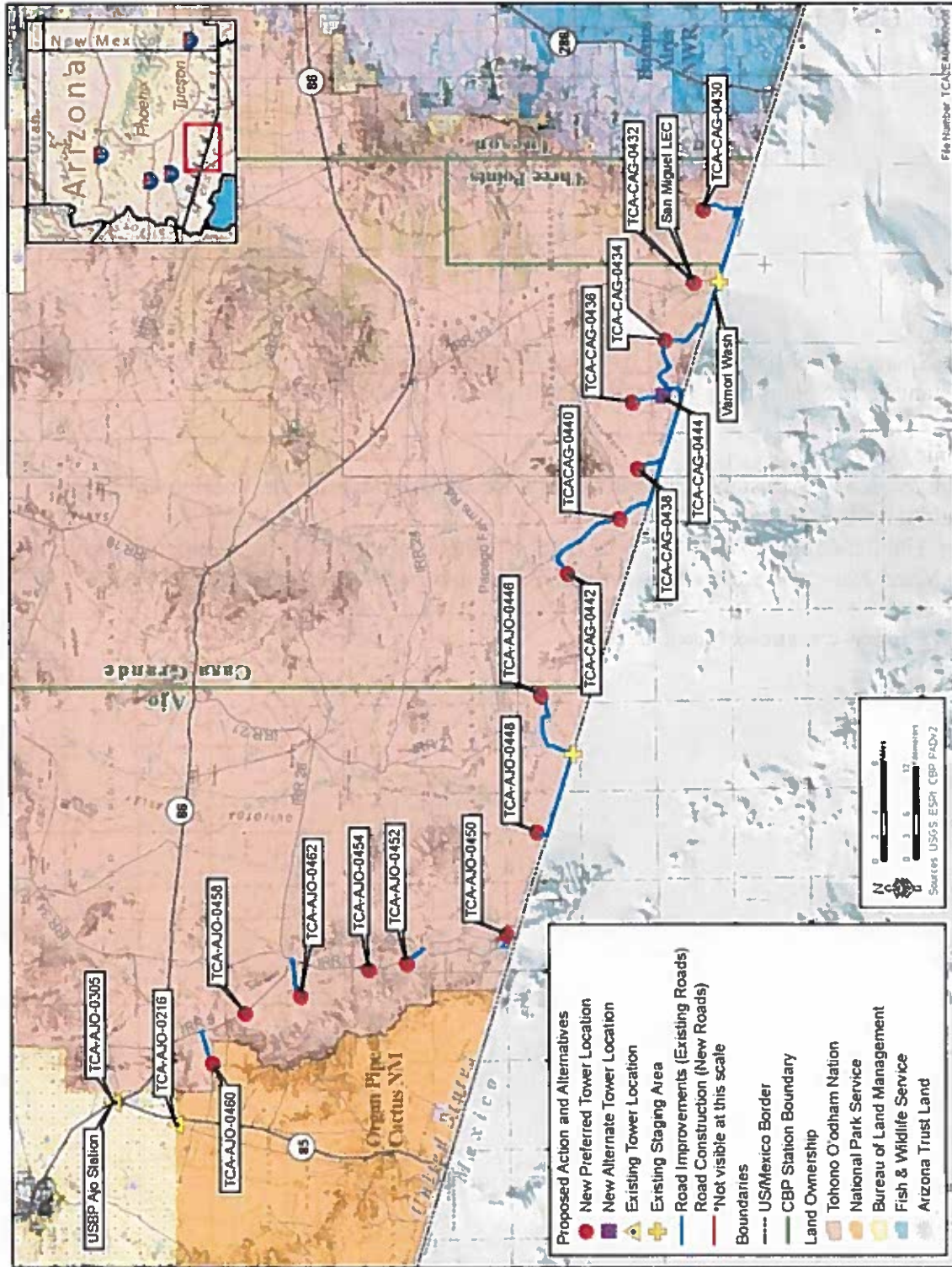
Steve Spangle, Field Supervisor, Fish and Wildlife Service, Phoenix, AZ ( 2 copies )  
Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ

cc (electronic copy):

Marlakay Henry, Assistant Director, Natural Resources Department, Tohono O'odham  
Nation, Sells, AZ  
Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ, pep@azgfd.gov  
Raul Vega, Regional Supervisor, Arizona Game and Fish Department, Tucson, AZ

Filename: TON Towers concurrence March 17, 2017

Figure 1. Location of proposed Integrated Fixed Tower Project on the Tohono O'odham Nation, Pima County, Arizona (figure is from the March 15 Biological Assessment).



**PUBLIC INVOLVEMENT & PROOFS OF PUBLICATION**

## Nation's attorney general post remains vacant

**Sells-** The Tohono O'odham Nation's attorney general's post remains vacant while the job is being advertised in a search for candidates.

Longtime attorney general Jonathan Jensen retired last August, and Laura Berglan, a lawyer in the tribe's top legal office was appointed acting attorney general.

The job is an advertised position under the Nation's Human Resources Department. Candidates submit their applications to that office, which are then reviewed and screened by the Tohono O'odham Legislative Council's Domestic Affairs Committee.

The attorney general is then voted for approval by the full Legislative Council.

According to the public job announcement, which was posted in December 2015, the attorney general pro-

vides legal advice and representation to all officials, agencies, departments, divisions and branches of the Tohono O'odham Nation.

The attorney general represents the Nation in all legal proceedings, and in other matters that affect the legal interests of the Nation; advises senior management and tribal officials; and supervises assistant attorneys general and contract attorneys hired by the Nation for specific legal matters and cases.

According to the job announcement, the attorney general's post is paid \$174,000 annually plus benefits.

The position is subject to Indian Preference, which means preference of qualified applicants is given first to enrolled members of the Tohono O'odham Nation, then to enrolled members of other tribal nations, and then to non-Indians.

## Man sentenced to 11 years for assaulting, injuring girlfriend

**Tucson-** A man from Santa Cruz Village was sentenced in federal court to 11 and one-half years in prison for assaulting and severely injuring his girlfriend in 2014.

On March 21, Cameron C. Saraficio, 34, was sentenced in U.S. District Court in Tucson to 139 months in federal prison.

According to the U.S. Attorney's office: On Dec. 25, 2014, Tohono O'odham police officers responded to a report of a domestic incident in progress. Saraficio had struck his girlfriend on the head with a large rock multiple

times causing severe facial and head lacerations. As a result of a prior felony conviction for assaulting the same victim, Saraficio had been released from prison just seven months earlier. Citing the need to protect the public and the victims from further acts of violence by Saraficio, the court sentenced Saraficio to 115 months in prison for his new crimes and revoked his supervised release on his previous conviction, adding two years to be served consecutively for a total 139 months. The victim is a member of the Tohono O'odham Nation.

## STOP (Securing Tohono O'odham Project) REMINDS YOU

Your child's car seat stays with them just like clothes, toys and food  
If you drop off your child drop off the seat  
For more info call your Tucson Area Child Passenger Safety Technicians

San Simon HC  
by Appointment  
Call Marlene or Pam  
520-362-7098

Santa Rosa Health Center  
by Appointment  
Call Victoria  
520-383-5570

San Xavier Health Center  
Thurs at 9 by Appointment  
Call Jeanette or Don  
520-295-2550

TON Health Dept/WIC  
by Appointment  
Call Donna or Priscilla  
520-383-6200

If you have any questions, concerns or comments please call Don at 520-295-5638  
Message brought to you by IHS Injury Prevention and the STOP Coalition

### In Loving Memory of TRAVIS L. MARTINEZ January 26, 1990 - April 25, 2015

On behalf of the Martinez Family and Solano's we would we would like to thank the following and anyone we may have missed:

Tucson Police Dept., Phoenix and Mesa Dept's.; Officer Romero; University Medical Center; Marcus Funeral Services; Alice Juan; Mari & Russell Juan; Clement, Verna & John Miguel; Leonard & Mary Juan; Miguel Family of San Xavier; Herman & Rose Ramon; Roberta Harvey & Paul Norris; Gary Harvey; Ruth Brown; Gwen & Irene Francisco; Salt River Fatherhood; Patra Rodriguez; Schuk Toak District; Ken & Marlo Norris Enos; Carlos Antonio; Edmond, Irene & Inz Enriquez; Ranger Joaquin Ramon; Lorraine Ramon; Carmen & Wesley Randall; Dora Gregorio; Della Bearpaw & Angie Listo; Denise Flores, Cindy & Mary; Marco & Hershey Lopez; Renaldo & Angie Ramon; Thomas & Donna Johnson; Francine & Jolene Ramon; Marilyn Enos; Albert Monte; Sil Nakya Community; Salt River Workshop; Rebecca & Mary; Willard Anita; Marcella & Lester; Decora Family; Phyllis Juan.

Anniversary Services: April 25, 2016 at Sil Nakya Village.

Graveside Services: 7 A.M.

Rosary Services: 10 A.M.-11 A.M. at St. Agatha Church.

Mass: 1 P.M., Father Ed.

April 30, 2016 Roadside Service and blessing of the cross, 9 A.M., Irvington Road Freeway & Midvale.

April 30, 2016 Memorial Service at San Xavier Mission in San Xavier District. Mass at 11:30 A.M.

### Baboquivari Unified School District #40 Sells, Arizona

Learning for Life - Duakud Oidag  
Mascamdag

Purchasing Department  
Telephone (520) 383-6746  
Fax (520) 383-5441  
Email: lcogan@busd40.org

#### NOTICE INVITING REQUESTS FOR PROPOSALS: RFP 1-16-17-AZCCRS Curriculum Development and Alignment

Request for Proposals will be received until 3:00 P.M. (MST), Friday, May 13th 2016, by Baboquivari Unified School District No. 40 ("Owner"), for Curriculum Development and Alignment Services. The application for RFP 1-16-17-AZCCRS Curriculum Development and Alignment will be available on Baboquivari Unified School District #40 district webpage May 2nd.

Proposals will be opened publicly at the Owner's Office, Baboquivari School District, Purchasing Office, Highway 86, Milepost 115.5, Sells, Arizona, starting Monday, May 2nd at 8:00 A.M. closing Friday, May 13th 2016 at 3:00 p.m. Information and Proposals submitted by offerors will be made available for public inspection during regular business hours after an award is made, if any, except for portions of Proposals which are designated by the offeror as "confidential" and which the Owner agrees should be kept confidential. Copies of the Request for Proposals ("RFP") may be obtained by contacting the Purchasing Agent's office located at Highway 86, Milepost 115.5, Sells, Arizona, 85634 phone number (520) 383-6746.

The owner intends to contract, if at all, with the offeror whose proposal conforms in all material respects to the requirements of the RFP, who has the capability to perform the contract requirements, the integrity and reliability to assure complete and good faith performance, and who submits the proposal which is most advantageous to the Owner based upon the factors set forth in the RFP. The owner may conduct post-proposal discussions with the offerors and may request submission of best and final offers. In order for a proposal to be considered, offerors must complete and submit the Proposal form, which is incorporated herein by reference.

It shall be mandatory on the contractor to whom the Contract is awarded, to comply in every respect with the applicable provisions of the Arizona Revised Statutes and with all other requirements of the laws of Arizona applicable to contracts for the services to be provided for school districts.

The Owner reserves the right to reject any or all Proposals, to withhold the award of a contract for any reason it may determine and to hold any or all Proposals for a period of forty-five (45) days. Any bid protests concerning this bid must be filed with the District Representative, who is Clementina Carlyle, Chief Financial Officer, Baboquivari Unified School District No. 40, Highway 86, Milepost 115.5, Sells, Arizona, 85634.

The owner reserves the right to waive any irregularities in any proposal if such action is determined by the Owner, in its sole discretion, to be in the best interest of the Owner.

BABOQUIVARI UNIFIED SCHOOL DISTRICT NO. 40

By Lisa Cogan  
Title: District Shepherd

### NOTICE OF AVAILABILITY DRAFT ENVIRONMENTAL ASSESSMENT FOR INTEGRATED FIXED TOWERS ON THE TOHONO O'ODHAM NATION IN THE AJO AND CASA GRANDE STATIONS' AREAS OF RESPONSIBILITY U.S. BORDER PATROL TUCSON SECTOR, ARIZONA U.S. CUSTOMS AND BORDER PROTECTION DEPARTMENT OF HOMELAND SECURITY WASHINGTON, DC

The public is hereby notified of the availability of U.S. Custom and Border Protection's (CBP) Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the construction, operation, and maintenance of 15 new integrated fixed tower sites on the Tohono O'odham Nation, within the Chukut Kuk and Gu-Vo Districts, in Pima County, Arizona. The Proposed Action includes collocating equipment on two existing communication towers and within two command and control facilities in U.S. Border Patrol Tucson Sector. The Proposed Action also includes the construction of 14 new access roads (up to 0.24 miles total) and improvement of approach roads (up to 70.90 miles total) on the Tohono O'odham Nation, as well as maintenance and repair of these roads. Approach roads are existing private or public roads used to travel to a tower site. Access roads are short road segments from an approach road into a tower site. The Proposed Action represents CBP's plan to develop technology and supporting infrastructure to provide a persistent surveillance capability along approximately 63 miles of the U.S. border in U.S. Border Patrol Tucson Sector. Comments concerning the Draft EA and Draft FONSI will be accepted for a period of 30 days from April 15, 2016, to May 16, 2016. Copies of the Draft EA and Draft FONSI will be available during this period at the Tohono O'odham Community College Library, Highway 86, Milepost 125.5 North, Sells, Arizona; the Venito Garcia Library and Archives, Main Street-Tribal Building, Sells, Arizona; and the Pima County Library, 101 N. Stone Avenue, Tucson, Arizona, as well as electronically at the following URL address: <http://www.cbp.gov/about/environmental-cultural-stewardship/nepa-documents/docs-review>. Comments should be postmarked prior to May 16, 2016, and sent to Mr. Paul C. Schmidt, U.S. Customs and Border Protection, Office of Technology Innovation and Acquisition, 1901 S. Bell Street, Suite 600, Arlington, VA 20598; by facsimile to (571) 468-7391; or by e-mail to OTIAENVIRONMENTAL@cbp.dhs.gov.

### NOTICE OF HEARING

Notice of Hearing in the Judicial Court of the Tohono O'odham Nation in the County of Pima, State of Arizona. In re the Marriage of: FRANCES REGALADO vs. JOSE A. REGALADO, Case number 2015-0231AV, Judge Walter Marcus. An action for Dissolution of Marriage in the above case has been filed and set for a hearing on June 22, 2016 at 10:00 a.m. You are hereby directed to appear and if you fail to appear the action may proceed without you. You may obtain a copy of the petition filed by contacting Lorraine K. Ventura at the Tohono O'odham Advocate Program, P. O. Box 890 Sells, AZ, 85634 (520) 383-3905.

AFFIDAVIT OF PUBLICATION

Stanley G. Throssell being first duly sworn, deposes and says that he is the legal advertising manager of *The Runner, Tohono O'odham Nation News*, a bi-weekly news publication printed and published in Pima County, State of Arizona, and of general circulation in Pima County, State of Arizona, and elsewhere, and the hereto attached

*Notice of Availability, Draft Environmental Assessment for Integrated Fixed Towers on the Tohono O'odham Nation in the Ajo and Casa Grande Stations' Areas of Responsibility*

was printed and published in the regular and entire issue of said *The Runner, Tohono O'odham Nation News*, for one (1) issues; that the first was made on the 15th day of April, 2016; that said publication was made on each of the following dates to wit:

Request of U.S. Customs & Border Protection/DHS, 1901 S. Bell St., Ste 700, Arlington, VA 20598

By

Stanley G. Throssell

Stanley G. Throssell  
Advertising Manager, *The Runner, Tohono O'odham Nation News*  
P.O. Box 773  
Sells, Arizona 85634

Subscribed and sworn before me this 4<sup>th</sup> day of May, 2016.

Notary: Abby

My Commission Expires: 2/20/18



ARIZONA DAILY STAR

Tucson, Arizona

STATE OF ARIZONA)  
COUNTY OF PIMA)

Debbie Freedle, being first duly sworn deposes and says: that she is the Advertising Representative of **TNI PARTNERS**, a General Partnership organized and existing under the laws of the State of Arizona, and that it prints and publishes the Arizona Daily Star, a daily newspaper printed and published in the City of Tucson, Pima County, State of Arizona, and having a general circulation in said City, County, State and elsewhere, and that the attached ad was printed and

Legal Notice

published correctly in the entire issue of the said Arizona Daily Star on each of the following dates, to-wit:

APRIL 15, 2016

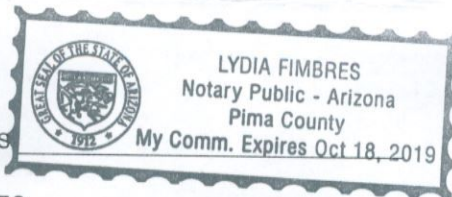
Debbie Freedle

Subscribed and sworn to before me this 20<sup>th</sup> day of

April 2016

Lydia Fimbres

Notary Public



My commission expires

AD NO. 8531279

**NOTICE OF AVAILABILITY  
DRAFT ENVIRONMENTAL  
ASSESSMENT FOR  
INTEGRATED FIXED TOWERS  
ON THE TOHONO O'ODHAM  
NATION IN THE AJO AND CASA  
GRANDE STATIONS' AREAS OF  
RESPONSIBILITY U.S. BORDER  
PATROL TUCSON SECTOR,  
ARIZONA U.S. CUSTOMS AND  
BORDER PROTECTION  
DEPARTMENT OF HOMELAND  
SECURITY WASHINGTON, DC**

The public is hereby notified of the availability of U.S. Customs and Border Protection's (CBP) Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the construction, operation, and maintenance of 15 new integrated fixed tower sites on the Tohono O'odham Nation, within the Chukut Kuk and Gu-Vo Districts, in Pima County, Arizona. The Proposed Action includes collocating equipment on two existing communication towers and within two command and control facilities in U.S. Border Patrol Tucson Sector. The Proposed Action also includes the construction of 14 new access roads (up to 0.24 miles total) and improvement of approach roads (up to 70.90 miles total) on the Tohono O'odham Nation, as well as maintenance and repair of these roads. Approach roads are existing private or public roads used to travel to a tower site. Access roads are short road segments from an approach road into a tower site. The Proposed Action represents CBP's plan to develop technology and supporting infrastructure to provide a persistent surveillance capability along approximately 63 miles of the U.S. border in U.S. Border Patrol Tucson Sector. Comments concerning the Draft EA and Draft FONSI will be accepted for a period of 30 days from April 15, 2016, to May 16, 2016. Copies of the Draft EA and Draft FONSI will be available during this period at the Tohono O'odham Community College Library, Highway 86, Milepost 125.5 North, Sells, Arizona; the Venito Garcia Library and Archives, Main Street-Tribal Building, Sells, Arizona; and the Pima County Library, 101 N. Stone Avenue, Tucson, Arizona, as well as electronically at the following URL address: <http://www.cbp.gov/about/environmental-cultural-stewardship/nepadocuments/docs-review>. Comments should be postmarked prior to May 16, 2016, and sent to Mr. Paul C. Schmidt, U.S. Customs and Border Protection, Office of Technology Innovation and Acquisition, 1901 S. Bell Street, Suite 600, Arlington, VA 20598; by facsimile to (571) 468-7391; or by e-mail to [OTIAENVIRONMENTAL@cbp.dhs.gov](mailto:OTIAENVIRONMENTAL@cbp.dhs.gov).

Publish April 15, 2016  
Arizona Daily Star



# Ajo Copper News

Hollister David, Publisher  
Gabrielle David, Editor  
Michelle Pacheco, Office Manager

P. O. Box 39 • Ajo, Arizona 85321  
Phone (520) 387-7688

FAX (520) 387-7505

STATE OF ARIZONA )  
 ) ss.  
COUNTY OF PIMA )

Hollister David deposes and says that he is the publisher of the *Ajo Copper News*, a weekly newspaper of general circulation and established character, published weekly at Ajo, Pima County, Arizona, and that

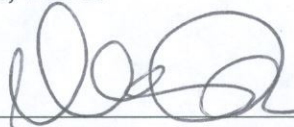
**NOTICE OF AVAILABILITY DRAFT ENVIRONMENTAL ASSESSMENT FOR INTEGRATED FIXED TOWERS ON THE TOHONO O'ODHAM NATION IN THE AJO AND CASA GRANDE STATIONS' AREAS OF RESPONSIBILITY U.S. BORDER PATROL TUCSON SECTOR, ARIZONA U.S. CUSTOMS AND BORDER PROTECTION DEPARTMENT OF HOMELAND SECURITY WASHINGTON, DC**

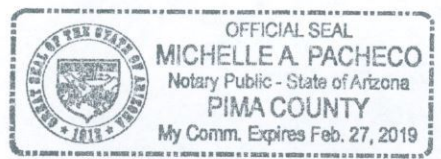
a correct copy of which is attached to this affidavit, was published in the said *Ajo Copper News* every week in the newspaper proper and not in a supplement for

**Publ. April 12, 2016**

  
\_\_\_\_\_  
Hollister David, Publisher,  
Ajo Copper News

Sworn to and subscribed before me, a Notary Public in and for the County of Pima, Arizona, this **12** day of **April, 2016**.

  
\_\_\_\_\_  
Notary Public



**NOTICE OF AVAILABILITY**  
**DRAFT ENVIRONMENTAL ASSESSMENT FOR**  
**INTEGRATED FIXED TOWERS ON THE TOHONO O'ODHAM NATION**  
**IN THE AJO AND CASA GRANDE STATIONS'**  
**AREAS OF RESPONSIBILITY**  
**U.S. BORDER PATROL TUCSON SECTOR, ARIZONA**  
**U.S. CUSTOMS AND BORDER PROTECTION**  
**DEPARTMENT OF HOMELAND SECURITY**  
**WASHINGTON, DC**

The public is hereby notified of the availability of U.S. Custom and Border Protection's (CBP) Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for the construction, operation, and maintenance of 15 new integrated fixed tower sites on the Tohono O'odham Nation, within the Chukut Kuk and Gu-Vo Districts, in Pima County, Arizona. The Proposed Action includes collocating equipment on two existing communication towers and within two command and control facilities in U.S. Border Patrol Tucson Sector. The Proposed Action also includes the construction of 14 new access roads (up to 0.24 miles total) and improvement of approach roads (up to 70.90 miles total) on the Tohono O'odham Nation, as well as maintenance and repair of these roads. Approach roads are existing private or public roads used to travel to a tower site. Access roads are short road segments from an approach road into a tower site. The Proposed Action represents CBP's plan to develop technology and supporting infrastructure to provide a persistent surveillance capability along approximately 63 miles of the U.S. border in U.S. Border Patrol Tucson Sector. Comments concerning the Draft EA and Draft FONSI will be accepted for a period of 30 days from April 15, 2016, to May 16, 2016. Copies of the Draft EA and Draft FONSI will be available during this period at the Tohono O'odham Community College Library, Highway 86, Milepost 125.5 North, Sells, Arizona; the Venito Garcia Library and Archives, Main Street-Tribal Building, Sells, Arizona; and the Pima County Library, 101 N. Stone Avenue, Tucson, Arizona, as well as electronically at the following URL address: <http://www.cbp.gov/about/environmental-cultural-stewardship/nepa-documents/docs-review>. Comments should be postmarked prior to May 16, 2016, and sent to Mr. Paul C. Schmidt, U.S. Customs and Border Protection, Office of Technology Innovation and Acquisition, 1901 S. Bell Street, Suite 600, Arlington, VA 20598; by facsimile to (571) 468-7391; or by e-mail to [OTIAENVIRONMENTAL@cbp.dhs.gov](mailto:OTIAENVIRONMENTAL@cbp.dhs.gov).



INTERNATIONAL BOUNDARY AND WATER COMMISSION  
UNITED STATES AND MEXICO

OFFICE OF THE COMMISSIONER  
UNITED STATES SECTION

April 29, 2016

Mr. Paul C. Schmidt  
U.S. Customs & Border Protection (CBP)  
Environmental Planning & Real Estate Branch  
Office of Technology Innovation and Acquisition  
1901 S. Bell St., Suite 600, Mail Stop 1403  
Arlington, Virginia 20598

Dear Mr. Schmidt:

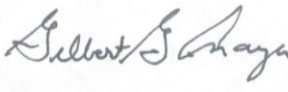
The United States Section, International Boundary and Water Commission (USIBWC) has received the draft Environmental Assessment (EA) for the Integrated Fixed Towers on the Tohono O'odham Nation in the Ajo and Casa Grande Stations' Areas of Responsibility.

The USIBWC had previously commented during the scoping period that the construction should remain outside of the Roosevelt Easement and that there should be no increased flood waters into Mexico as a result of the project.

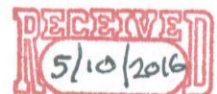
The maps contained within demonstrate that the towers and buildings do lie outside of the easement, however, the hydrology sections do not demonstrate any diversions of flood flows nor is there reference to any hydrologic studies. For the final EA, please include any study results that detail the effects on the stormwater due to construction activities.

If you have any questions, please feel free to call me at (915) 832-4749 or Mr. Wayne Belzer at (915) 832-4703.

Sincerely

*for* 

Jose A. Nunez  
Principal Engineer



From: [Giovanni Conti](#)  
To: [OTIAENVIRONMENTAL; CBP ENVIRONMENTAL PROGRAM](#)  
Subject: Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation  
Date: Sunday, May 15, 2016 11:55:22 PM

---

Please do not place surveillance towers on the Tohono O'odham Nation. The Gu-Vo District Governing Council has clearly stated they do not want the towers on their lands. I am asking you to show them some respect. One of the towers would be on a sacred burial site and six would be in or near their communities.

Respect the Gu-Vo District position of "NO IFTs whatsoever."

Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places.

Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.

Respect the Gu-Vo District's efforts to protect future generations. Thank you,  
Giovanni Conti

[REDACTED]  
[REDACTED]

**From:** [Nancy Bennett](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Re "Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation."  
**Date:** Monday, May 16, 2016 6:59:39 PM

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I am writing in strong opposition to the construction of the 15 DHS surveillance towers on the Tohono O'odham nation.

As proposed:

- these would include several towers on or adjacent to sacred burial sites.
- involve creating more than 40 new roads on native land.

This \$145 million contract with Israeli defense contractor Elbit **is opposed by tribal members, and is an obvious violation of native sovereignty.**

Please do NOT allow the construction of these surveillance towers on the Tohono O'odham nation.

Thank you.

Nancy Bennett



**From:** [Debby Buchanan](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation  
**Date:** Tuesday, May 17, 2016 12:56:42 AM

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Mr. Paul C. Schmidt, U.S. Customs and Border Protection,  
Office of Technology Innovation and Acquisition

Dear Mr. Schmidt,

I am writing with regard to the Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation. As someone who has lived in Southern AZ for the majority of my life since the late 1950's, I am disturbed with the lack of regard or respect for the Tohono Nation in this proposal. If I understand it correctly, you are saying that these towers would have "no significant impact" on the land or the people of the targeted areas, even though the people and their representatives (especially in the western region) have clearly stated that they do not want them there.

It was my further understanding that tribal lands were under tribal jurisdiction, so I am perplexed where your agency gets the idea that it's OK to ignore their express desires regarding this issue. It seems especially harsh to propose putting any towers in any area designated as burial grounds, which are sacred to native peoples.

The callous indifference for any sacred traditions and the wishes of the people who live in the area seems arrogant at best. It is indicative of the lack or regard for what is best for the local people you will be invading with your roads, technology, and traffic. As someone who lives in an area where you already have a heavy presence, I am all too well aware of the questionable impact measures like this have on the local population and environment.

Such concerns are especially true when recent statistics show that the population of "illegal immigrants" is lower than it has been in decades, and that, in fact, there are more people leaving our country than there are coming in, making me, as a tax-payer, question the expenditures for such projects.

I sincerely think you should reconsider and be more honest about the effect your project will have on the the people who it will impact.

Respectfully,

Deborah Buchanan

**From:** [Jack Buthod](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Regarding Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation  
**Date:** Sunday, May 15, 2016 11:27:00 PM

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I am writing to urge that you do NOT place towers on Tohono O'odham nation.

You must respect the will of the Tohono O'odham nation to not have these towers on their land. Respect the Gu-Vo District position of "NO IFTs whatsoever."  
Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places. Respect the Gu-Vo District's efforts to protect future generations. Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.

Sincerely,  
John Buthod



**From:** [Paul Daniello](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Draft EA for Integrated Fixed Towers on the Tohono O'odham Nation in the Ajo and Casa Grande Stations' Areas of Responsibility  
**Date:** Sunday, May 15, 2016 7:54:13 PM

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15 May 2016

Mr. Paul C. Schmidt  
U.S. Customs and Border Protection  
Office of Technology Innovation and Acquisition  
1901 S. Bell Street, #600  
Arlington, VA 20598

Dear Mr. Schmidt:

Please accept my comments of the draft environmental assessment for the integrated towers on the Tohono O'odham Nation land in the Ajo and Casa Grande Stations area of responsibility. MY comments follow. As the Tohono O'odham are sovereign nation, I think the Department needs to respect the wishes and concerns of the tribes.

Seven of the towers are proposed to be located in the Tohono O'odham Gu-Vo District. Six of the seven towers are in or near communities. The Gu-Vo governing body has voted "No" to the proposed tower placement for reasons to protect and respect culturally important areas including ancient burial and ceremonial sites located there. Moreover, the Gu-Vo want to protect the area for future generations.

It is important to note that the proposed towers would be built by Elbit Systems, an Israeli organization, that placed similar units in Palestine to enforce ethnic segregation. The US Government should not reward Elbit for segregating societies.

I urge the Department to respect the Go-Vu District's vote and terminat ethe proposal to place the towers on tribal land. Thank you for the opportunity to comment.

Yours truly,  
Paul Daniello

A black rectangular redaction box covering the signature area.



Mr. Paul C. Schmidt  
U.S. Customer Border Protection  
Office of Technology Innovation and Acquisition  
1901 S. Bell Street, Ste 600  
Arlington, VA 20598

9 May 2016

RE: Draft EA & Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation

Greetings Mr. Schmidt:

I write urging you to stop the construction and development of the drone / surveillance program along the US southern border, most specifically, those proposed on the lands of the Tohono O'odham Nation.

If in "protecting" the borders we violate prior agreements made to the sovereign nation of the Tohono O'odham then what, of value, are we defending?

Furthermore, do the effectiveness of these programs merit the cost?

I think it is difficult for a nation of immigrants and their off spring—all of us new to these lands in relative terms, (myself included), to understand a deep relationship to Place.

When we hear Native peoples plea with our government "not to defile sacred lands with towers, etc....," we have no reference point with this depth of "relationship" to place.

But will you please, , please employ deep listening and hear and respect the wishes of the peoples of the Tohono O'odham to stop this program on their lands?

Please DO NOT move forward with this program. The US government agreed to the formation of the sovereign land mass for the Tohono O'odham Nation.

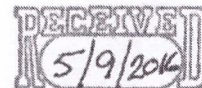
Surely, these towers are in direct violation of that agreement, which brings me back to my first question:

What exactly are we protecting / defending if we are a nation of bullies who break agreements when interests serve a powerful few?

If that is our new way, then, what is their of value to protect?

Thank you in advance for your consideration.

Dee Downing  
2293 Doc Holiday Drive  
Park City, Utah



**From:** [Catriona Rueda Esquibel](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation  
**Date:** Monday, May 16, 2016 10:20:12 AM

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Greetings! I oppose the construction of 15 surveillance towers near the US/Mexico border on the Tohono O'odham Nation. I urge you to respect the voices of Native Tohono O'odham leaders who voted against allowing the Israeli company Elbit Systems to build surveillance towers on their land.

Respect the Gu-Vo District position of NO IFTs whatsoever.  
Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places.  
Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.  
Respect the Gu-Vo District's efforts to protect future generations.

Sincerely,

Catriona Rueda Esquibel



**From:** [Joshua Garcia](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Environmental Impact (Tohono O'odham)  
**Date:** Monday, May 16, 2016 4:47:26 PM

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As a member of the community of Vamori located within the Chukut Kuk District of the Tohono O'odham Nation I disagree with the findings of the environmental impact report. I believe the construction of the proposed towers will negatively effect animal species that are either endangered or are at their northern limit.

I also oppose the impact study because several of the sights of the proposed towers are in locations that are culturally significant to many families in the area. For example one location, Toro's Ranch is the location of a saguaro fruit harvesting camp. The proposed road will cut across an abandoned community called Wakimagi. Wakimagi is my families traditional farm sight . Another proposed sight is very near our family cemetery.

Members of other communities have similar concerns . The impact report makes no reference to these concerns.

Thank you for your consideration

Joshua Garcia

**From:** [Blake Gentry](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** comments submitted regarding "Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation."  
**Date:** Monday, May 16, 2016 4:38:50 AM  
**Attachments:** [image.png](#)  
[image.png](#)  
[Letter regarding Elbit Towers.pdf](#)

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See attached letter in pdf form as a public comment regarding: "Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation."

Blake Gentry.

[OTIAENVIRONMENTAL@cbp.dhs.gov](mailto:OTIAENVIRONMENTAL@cbp.dhs.gov)

Comments regarding the:  
**“Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O’odham Nation”**

Submitted by Blake Gentry, MPPM

Address: [REDACTED]  
[REDACTED]

The proposed tower TCA-CAG-0430 is within PCE # 6, a designated Jaguar habitat area according to the US Fish and Wildlife Service (p.7). The entire project will have on negative on-going effects after construction and local disturbance from associated road building for service and maintenance of the towers for the jaguar, an endangered species, and I quote the US Fish and Wildlife Service Commission statement:

While the proposed IFT project will directly impact some jaguar habitat elements (loss of vegetation cover due to construction of the IFTs and access roads), the primary effect to the PCEs of proposed jaguar critical habitat are related to the increase in human disturbance and presence during the construction, operation, and maintenance of the project. This directly affects PCE #6 and indirectly affects all of the remaining PCEs by potentially reducing the opportunity for jaguars to utilize habitat elements due to ongoing human presence and disturbance. In

[source: US Fish and Wildlife Service, July 19, 2013 letter; <sup>AESO/SE</sup>02EAAZ00-2013-TA-0256 ]

Given the historical encroachment of the US government’s military operations on the Barry Goldwater Bombing Range which has damaged critical habitat for Pronghorn Sheep to the west of the proposed installation of seven towers (TCA-AJO-0530, TCA-AJO 0216, TCA-AJO 0460, TCA-AJO 0462, TCA-AJO 0458, TCA-AJO 0545, TCA-AJO 0450) in the Quijotoa Valley, the installation of additional military and security surveillance infrastructure is a cost that outweighs the benefits of the theoretical policy goal of CBP of immigrant deterrence, and its primary mission of anti-terrorism.

As a private citizen who continues to support Tohono O’odham, Hia Ched O’odham, and Akimel O’odham in Sonora and their right as legal tribal members of the Tohono O’odham Nation to access their own reservation in Arizona that resides within their original homeland, a territory bisected by the US border installations and personnel that increasingly employ hostile and restrictive actions against their movement as historically migratory peoples, and against those who attempt to enter the United States at the Lukeville Port of Entry but who are often delayed or refused entry into the United States so that they may access Indian Health Services as legal tribal members in Sells, Arizona and at other IHS facilities, the installation of more surveillance towers will increase the insecurity of the O’odham and force them to live with more losses of liberty and freedom of movement in the O’odham biome of the Lower Colorado River basin. They are also part of the “environment” that is affected by the proposed project.

This project is a violation of the United Nations Declaration of the Rights of Indigenous Peoples, UNDRIP Article 7, which states,

1. *Indigenous individuals have the rights to life, physical and mental integrity, liberty and security of person.*

The construction of surveillance towers that loom over the low desert scrub is alien to the culture of the Tohono O’odham in their own land, and they are *being forced to become*

*estranged from their own land within their own land*, and it is thus a violation of Article 8. Tohono O’odham will literally not have the right to harvest Saguaro fruit which is central to their ceremonial life without the presence of towers looming over their valleys and foothills. This is another step to be taken by security personnel and military contractors that literally impedes their capacity to peacefully harvest Saguaro fruits, collect cholla buds, and materials for basket making, and other O’odham cultural practices without the presence of non-O’odham since they will be subject to CBP surveillance and will have no protection from Border Patrol responding to their presence in their own desert land as stated in articles 8 and 11:

UNDRIP Article 8

*1. Indigenous peoples and individuals have the right not to be subjected to forced assimilation or destruction of their culture.*

UNDRIP Article 11

*1. Indigenous peoples have the right to practice and revitalize their cultural traditions and customs. This includes the right to maintain, protect and develop the past, present and future manifestations of their cultures, such as archaeological and historical sites, artefacts, designs, ceremonies, technologies and visual and performing arts and literature.*

A means test of the absurd idea that O’odham will continue to practice their religion would be the equivalent of placing a tower in the middle of a church or Synagogue which spies on all the parishioners, in the very twisted logic of the US Congress and the their security force, the Customs and Border Patrol, “for their own protection.”

The continued forced separation of O’odham in Sonora from the O’odham on the Papago reservation in Arizona, where many have family members living presently will be furthered by the refusal of the US CBP to act with impunity as they deny entry to the O’odham in Sonora because they do not have the financial means to meet the requirements for US visas to travel to their own homeland under current US law. The towers will further make it illegal for O’odham in Sonora to exercise their tribal rights as members of the Tohono O’odham nation, which is some 2,221 people.

For these stated reasons, and due to the impoverishment of the O’odham due to US negligence after 82 years of the presence of the Dept., of the Interior to historically account for the Tohono, Akimel, and Hia Ched O’odham customary migration patterns within their customary biomes, I oppose this project and believe it will cause permanent environmental damage. It is tantamount to a form of ecocide which denies the O’odham ecological existence in their lands as indigenous peoples, and it is therefore a form of genocide.

As a member of the largest tribe in the United States, the tribe that had it’s homeland taken by US executive order over and above the decision of the US Supreme Court, I am well aware of the permanent nature of this proposed action and the form of genocide it has taken. If this project is completed, every US official, domestic and foreign contractor, US government agency, and US congressional person involved in this militarization of indigenous O’odham lands will be guilty of genocide, and their succeeding generations will bear the mark of being the offspring of a genocidal peoples for seven generations.

All my relations,

Blake Gentry, [REDACTED]  
[REDACTED]

**From:** [Kendra Layton](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation  
**Date:** Monday, May 16, 2016 10:37:35 PM

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Dear Mr. Paul C. Schmidt,

I am writing regarding the construction of fixed towers on Tohono O'odham Nation. I strongly oppose this measure as it has multiple environmental and social impacts. I am a public educator in Colorado and I have spent time along the U.S. Mexican border in Nogales, Arizona, next to Tohono O'odham land. Firstly, the construction of towers disrupts the ecosystem and desert wildlife. It impedes their movement, territories, and reproduction. Secondly, the towers do not respect tribal sovereignty of the Tohono O'odham Nation, as the measure is opposed by tribal members. Based on these considerations I strongly oppose the construction of fixed towers on the Nation and urge you to stop this endeavor.

Sincerely,  
Kendra Layton

**From:** [Eva Lewis](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Opposing the proposed Integrated Fixed Towers towers to be built on the Tohono O'odham Nation  
**Date:** Monday, May 16, 2016 6:57:51 PM

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To Whom it May Concern,

I am writing to express deep opposition to the construction of the proposed Integrated Fixed Towers (IFT). These towers are an affront to O'odham national sovereignty. The Gu-Vo district's governing council already firmly stated their opposition to the towers being built on their land. The current locations where they are to be built are on sacred O'odham burial grounds and in the midst of O'odham communities. Respect should be shown for the O'odham people and their right to protect and preserve their sacred sites and communities. No studies have been done to show what effect these towers will have on the migration pattern of bees or other wildlife fundamental to the ecosystems of these borderlands. There are grave environmental and social concerns about the construction of the proposed IFT. The United States government should respect the authority of the Gu-Vo district to make decisions regarding what happens on their land and to preserve the environment and the land by protecting it for future generations. This means not building IFT's.

Sincerely,  
Eva Lewis



**From:** [Sarah M](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Comments Re: Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation  
**Date:** Friday, May 13, 2016 2:02:00 AM

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I oppose this plan.

Please respect the Gu-Vo District position of NO IFTs whatsoever.

Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places.

Respect the authority of Gu-Vo District as Odham authority, voice of Odham Communities and community members.

Respect the Gu-Vo District's efforts to protect future generations.

Thank you.

**From:** [Manning, Patricia A - \(pmanning\)](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** opposition to Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation.  
**Date:** Monday, May 16, 2016 6:26:13 PM

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To Whom it May Concern:

I wish to express my strongest opposition to expanding the proposed towers into the Tohono O'odham nation's lands. It would mean the further violation of tribal sovereignty, in continued disregard for indigenous authority and spiritual sites and sensibilities.

It would also mean further turning our beloved borderlands into an increasingly militarized zone of reduced constitutional protections and increased surveillance, which creates fear as well as further mistrust and division among our residents and neighbors.

Moreover, the fragility of the habitat means that further incursions such as these would lead to increasing, widespread degradation of the flora and fauna of our unique, beloved desert homelands.

The money spent on ultimately ineffective and highly intrusive technologies such as these would be much better spent on investing in a Marshall-type Plan for investing in economic development in Central America and Mexico which would allow the subsequent development of their human capital, functioning judicial systems, and economic opportunities, to help them stem the impunity, structural and reactive violence, and unrelenting poverty that force so many of their citizens to flee.

This proposal for more IFTs on TO land does nothing to address the root causes of migration, and adds to the growing harms to nations, cultures, landscapes and animals, caused by the official reactive, isolationist, short-sighted policy of a militarized border.

Sincerely,

Patricia Manning

\*\*\*\*\*

Patricia Manning

[Redacted signature block]



**From:** [Paula Miller](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Comment for Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation."  
**Date:** Monday, May 16, 2016 3:48:50 PM

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To Whom It May Concern:

I am writing to comment on the draft EA and draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation in Southern Arizona. I am a resident of Southern Arizona and have spent much time hiking the Sonoran desert. I have seen first hand the devastating impact the border surveillance has done in the desert. I am opposed to additional towers and new roads being constructed in this area including the Tohono O'odham Nation. These towers and new roads will continue to disrupt the migration of wildlife, the natural flow of water and cultural and religious rituals of the Tohono O'odham. Please do not construct these towers or build these new roads. Thank you.

Sincerely,

Paula Miller



**From:** [Dan Millis](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** RE: Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation  
**Date:** Monday, May 16, 2016 6:45:06 PM  
**Attachments:** [TohonoOodhamIFTSierraClubCommentsFINAL.pdf](#)

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Sierra Club Grand Canyon Chapter

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

May 16, 2016

Submitted electronically to: [OTIAENVIRONMENTAL@cbp.dhs.gov](mailto:OTIAENVIRONMENTAL@cbp.dhs.gov)

Mr. Paul C. Schmidt,

U.S. Customs and Border Protection,

Office of Technology Innovation and Acquisition,

1901 S. Bell Street, Suite 600,

Arlington, VA 20598

RE: Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation

To Whom It May Concern:

Please accept the following comments on the Draft EA and Draft FONSI for Integrated Fixed Towers (IFT) on the Tohono O'odham Nation.

Founded in 1892, the Sierra Club is the oldest and largest conservation organization in the United States, with over 2.1 million members and supporters, including approximately 40,000 here in Arizona. Sierra Club's mission is to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives. We have been campaigning with a specific focus on the protection and preservation of the U.S.-Mexico borderlands in southern Arizona since 2006, and our nationally-organized Borderlands Team works to educate policymakers, members, and the public at large about border environmental issues. Our members have been involved in advocating for lands, waters, and wildlife in the border region for decades.

## **INTRODUCTION**

Remote surveillance towers have a variety of environmental and community impacts that are not yet fully understood. Their level of impact to sensitive resources and species will depend upon the number of towers, the locations where towers are sited, how Border Patrol operations are conducted on the ground, and, most importantly, the level of environmental planning, assessment, and mitigation undertaken by Homeland Security.

Given the size and scope of the Tohono O'odham IFT Tower Project, and its proximity to the Organ Pipe Cactus National Monument (OPCNM) and the sensitive species and resources therein, it is necessary to conduct a full Environmental Impact Statement (EIS) in accordance with the process established under the National Environmental Policy Act (NEPA). The waiver of 37 federal laws, including NEPA, issued April 1, 2008 by former Department of Homeland Security (DHS) Secretary Chertoff, applies only to barriers and roads, not to this project. Therefore, the Tohono O'odham IFT Tower Project and its associated infrastructure must be subject to the NEPA process and a full EIS must be produced.

Seven of the proposed new construction towers would be sited in the Gu-Vo District. The Gu-Vo District has made DHS aware that it opposes all of these towers due to a variety of concerns, including impacts to mountains and sites that are sacred, of historical significance, ceremonial, or otherwise important to residents of the Gu-Vo District. It is not clear from available documentation that DHS understands the full range of impacts that this project would have on the people, landscapes, wildlife, and resources of the project area, and the opposition letter signed by Gu-Vo District Chairman Rodrick Manuel, Sr. and Vice Chairman

Angelita Castillo indicates to us that proper on-the-ground and interagency consultation either has not occurred, or has failed.

The Draft EA and FONSI of the Tohono O'odham IFT Tower Project also fails to address the issue of operations, which is of primary importance to the mitigation of impact to the resources of the Tohono O'odham Nation and the adjoining OPCNM. For the Tohono O'odham IFT Tower Project to function in a manner compatible with the preservation of these resources, it must be demonstrated that the project will allow for the reduction of operational impacts to the Tohono O'odham Nation, not just by shifting the field of operational engagement elsewhere, but by keeping Border Patrol operations more contained and reducing impacts such as off-road vehicle tracks and disturbance of local communities and tribal members. Operational impacts, including cross-country driving, disturbance of sensitive resources, etc, may be reduced if the towers successfully allow Border Patrol to operate closer to established roadways, but the Draft EA and FONSI fail to demonstrate how this will occur. In addition, impacts to quality of life and privacy of those living within sight of these facilities have not been given due consideration or properly analyzed by CBP, as indicated by the formal opposition of the Gu-Vo District.

Given that the proposed tower locations will be permanent in nature, it is imperative that the number of towers and locations be thoroughly researched to minimize foreseeable impacts, and that further research is done to assess the nature of these impacts, especially in community and wildland settings. Reasonable alternatives should be evaluated as should the cumulative impacts of this project. The U.S. Fish and Wildlife Service and others have noted the need for additional research on electromagnetic radiation and other aspects of remote towers and related impacts to people, birds and wildlife.

Road improvement and maintenance should be planned and engineered for sustainable use in operation and maintenance of the towers, so that increased traffic on roads already abused by excessive Border Patrol traffic does not result in further damage at wash crossings, erosion and sedimentation problems. The 85-foot segment of new road construction adjacent to TCA-CAG-0434 appears to connect two roads which were not previously connected. If this is the case, impacts of increased traffic from this new interconnection should be addressed.

Our review of the DEA has led us to conclude that it is unlawfully narrow because it fails to thoroughly consider any action alternatives of various tower number and array configurations, and also fails to consider other actions that could meet a better-expressed

goal. In addition, the DEA provides a very shallow analysis of cumulative and synergistic effects of the proposed action and other ongoing border security infrastructure projects in the project area. The piecemeal Environmental Assessments completed by DHS/CBP in southern Arizona have been inadequate to assess the collective impacts of these related and other foreseeable federal actions. Importantly, this DEA does not analyze, but rather merely mentions, the predictable redirection of illegal activities into adjacent lands resulting from construction of surveillance tower arrays; nor does it properly examine the cumulative impacts of such infrastructure upon sensitive species, or the impacts due to the introduction and colonization of invasive vegetation resulting from extensive land disturbance and construction activities. Conducting a regional Environmental Impact Statement for all DHS “tactical infrastructure” is the only appropriate course of action if DHS desires to comply with NEPA.

### **A REGIONAL ENVIRONMENTAL IMPACT STATEMENT IS REQUIRED**

Because the DEA fails to adequately disclose and analyze the proposed project’s anticipated effects to wildlife and natural resources, and does not adequately assess reasonable alternatives and cumulative impacts from ongoing and related border security infrastructure projects, we conclude that a regional EIS that includes a lawful analysis of environmental impacts and alternatives is required. This proposed federal project warrants a much more detailed analysis than is provided in the DEA.

Despite some thoughtful conservation measures, a “Finding of No Significant Impact” is not appropriate given the scale of the project and the ecologically and culturally sensitive areas that will be directly and indirectly impacted. In addition, there are several glaring omissions with regard to threatened and endangered species that must be addressed. These deficiencies indicate a need for a significantly more detailed analysis generally not afforded by Environmental Assessments.

As such, the DEA does not adequately consider nor disclose the potential environmental impacts of the proposed actions within the Tohono O’odham IFT Tower Project area. Among other flaws, the DEA fails to adequately consider impacts on sensitive wildlife. Furthermore, the DEA has failed to consider the likely and foreseeable cumulative impacts that the proposed construction will have, especially when taken together with other proposed and constructed walls, fences, barriers, and related infrastructure along the U.S.-Mexico border in the State of Arizona, on sensitive wildlife and other natural resources in the region that are collectively a part of the ongoing and rapid DHS tactical infrastructure build-up, of which this project is a part. The arbitrary segmentation of concurrent border security infrastructure



projects is in violation of NEPA.

### **A REASONABLE RANGE OF ALTERNATIVES HAS NOT BEEN CONSIDERED**

NEPA requires a discussion of the “alternatives to the proposed action.” 42 U.S.C. §§ 4332(C)(iii),(E). This alternatives analysis is “the heart” of the NEPA process, and is intended to provide a “clear basis for choice among options by the decision maker and the public.” 40 C.F.R. 1502.14; *Citizens for a Better Henderson v. Hodel*, 768 F.2d 1051, 1057 (9th Cir. 1985) (EIS must consider “every” reasonable alternative). An agency’s failure to consider a reasonable alternative is thus fatal to its NEPA analysis of a proposed action. See *Idaho Conservation League v. Mumma*, 956 F.2d 1508, 1519-20 (9th Cir. 1992) (“The existence of a viable, but unexamined alternative renders an environmental impact statement inadequate.”); Forty Most Asked Questions Concerning CEQ’s NEPA Regulations, 48 Fed. Reg. 18,026 (March 16, 1981)(“In determining the scope of alternatives to be considered, the emphasis is on what is ‘reasonable’ rather than on whether the proponent or applicant likes or is itself capable of carrying out the particular alternative. Reasonable alternatives include those that are practical or feasible from a technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.”).

Rather than presenting a purpose and need statement that reflects the larger goal of improving border security, and then evaluating different means to achieve that goal, DHS in this case has defined the construction of 15 towers and the retrofit of 2 more as the goal. Because the DEA’s Alternative 3 is only a minor change in location of one particular tower site, there is not a range of viable and significantly different alternatives to compare the preferred alternative against. Thus, the DEA does not meet this requirement of NEPA. We encourage DHS to consider alternative locations of towers proposed in and adjacent to threatened and endangered designated critical habitat, roadless areas, sacred sites, culturally significant areas, known nesting sites, etc., and we ask that DHS not construct towers opposed by the Gu-Vo District until or unless local residents’ concerns are adequately addressed. We appreciate the apparent effort to locate towers on or near existing roads and impacted areas to minimize the need for new road construction. However, the purpose of this project needs to be expressed in terms of security goals to be met, rather than in terms of numbers and locations of towers to be built. Alternatives to towers should be considered.

### **CUMULATIVE EFFECTS HAVE NOT BEEN SUFFICIENTLY ANALYZED**

Despite an effort to catalog various DHS and other foreseeable agency projects in the project area, the DEA falls short of analyzing the cumulative effects of these projects. In other words,

the laundry list of projects catalogued does not provide the project proponent or the public with enough information to understand how these projects have additive, synergistic and cumulative impacts upon the human environment and the sensitive ecology of the Sonoran Desert where the project is proposed. For instance, how are surveillance towers, in conjunction with hundreds of miles of newly constructed walls and vehicle barriers anticipated to impact illegal activities, habitat suitability and cross-border habitat connectivity, etc.? How are surveillance towers, and the information they gain, anticipated to impact the location, frequency and duration of enforcement activities in the surrounding areas? For instance, if the location of towers pushes traffic deeper into mountain and canyon country, this indirect impact will be almost immediate and have severe consequences for ecologically sensitive areas. On the other hand, if surveillance towers and enforcement activities effectively act as deterrents to illegal entry, it is possible some of these impacts could be beneficial not only for security, but to wildlife habitat. However, without an analysis of what can be reasonably anticipated, project proponents are left without sufficient information to inform their decisions.

NEPA requires federal agencies proposing to undertake comprehensive actions for development of a region, or proposing to undertake a series of related actions within a region that will have cumulative and synergistic impacts on the environment, to consider and disclose the environmental impacts of such actions in a comprehensive EIS. If DHS fails to prepare a comprehensive EIS that analyzes and discloses the individual, cumulative and synergistic impacts of these interrelated projects, it will be in violation of NEPA.

## **ANALYSIS OF POTENTIAL IMPACTS TO THREATENED AND ENDANGERED SPECIES AND CRITICAL HABITAT IS INADEQUATE**

Despite the importance of the large project area to a diversity of plants and other organisms, the DEA's analysis of potential impacts to them by construction of the proposed surveillance towers and supporting infrastructure is insufficient. This is in part because DHS has chosen to conduct a lesser Environmental Assessment instead of beginning with a more thorough Environmental Impact Statement. This is especially apparent with respect to the DEA's analysis of impacts on special status species, including species listed as threatened or endangered pursuant to the Endangered Species Act ("ESA").

By its nature, the impact of the proposed project will extend well beyond the confines of the footprint of the surveillance towers and supporting access infrastructure. First, the predictable re-direction of illegal activities away from the towers is discussed, but not

analyzed. Second, an increase of enforcement activities within the visible range of the surveillance towers in response to the real-time information they obtain is discussed, but not analyzed. Third, the long-term impacts and disturbance from noise, lights, maintenance, and interdiction activities upon wildlife and habitat quality briefly discussed, but not analyzed. The fact that all of these impacts have been noted in the DEA, but not analyzed so as to provide the project proponent or the public sufficient quantitative information regarding the nature and severity of such impacts, is further evidence that the DEA is insufficient and should have triggered an Environmental Impact Statement to be conducted. Expediency simply cannot be equated with compliance.

### **Threatened, Endangered and Imperiled Species:**

#### **Cactus ferruginous pygmy-owl**

The Cactus ferruginous pygmy-owl (pygmy owl) (*Glaucidium ridgwayi cactorum* - proposed reclassification) is an imperiled species found and observed in the project area. This species was listed as an endangered species in 1997 and was delisted in 2006. The decision to delist the pygmy-owl has been appealed to the Ninth Circuit Court of Appeals and is currently pending. The pygmy-owl was not delisted because it had been “recovered”, but rather based upon legal technicalities. Since being delisted, this species has continued to decline throughout its range due to prolonged drought (Flesch 2008), development of its habitat, and numerous other threats. Concurrent with pending legal challenges to the delisting, the pygmy-owl has been petitioned for relisting based upon new taxonomic information (Proudfoot et al. 2006), classifying the pygmy-owl occurring in the project area as *Glaucidium ridgwayi cactorum*, as well as new threats such as border security infrastructure that has been constructed since delisting. There is a strong likelihood this species will be re-listed as an endangered species. This decision may even be made prior to construction beginning on the proposed project.

Therefore, we urge DHS to assess the potential impact of proposed tower and infrastructure development, maintenance and associated interdiction activities upon this imperiled species in conjunction with the USFWS and the AZGFD.

Research conducted on the Organ Pipe Cactus National Monument (OPCNM) illustrates the disruptive effects of border related activities to pygmy-owls at numerous occupied sites at OPCNM (Snyder 2005, Table 1). Snyder (2005) states that the most notable issue at OPCNM

“is the increasing drug smuggling, illegal immigrants and law enforcement activity which results in much greater human disturbance to the birds”. The National Park Service (NPS) believes “that cactus ferruginous pygmy-owls within the monument have been subject to repeated disturbance events and some critical habitat degraded as a result of a long-term drought and impacts associated with illegal migration, drug smuggling, and law enforcement interdiction efforts” (Snyder 2005). The Biological Assessment for the vehicle barrier at OPCNM states that, with so many roads sprouting up due to border issues, “... crosscountry travel has physically damaged three recently-occupied territories of the endangered cactus ferruginous pygmy owl.

The potential for the proposed project, including ongoing maintenance, to impact this species and their habitat long-term is a strong likelihood, and as such should not be omitted from the DEA or EIS. Surveys for pygmy-owls should be conducted in the vicinity prior to any construction activities commencing. (Please see discussion under Lesser long-nosed bat section for potential radio frequency and electromagnetic radiation impacts to birds.)

### **Lesser long-nosed bat**

Two of the proposed towers (TCA-AJO-0460 and TCA-AJO-0458) are located within known roost site perimeters of the lesser long-nosed bat. The potential impact of towers for strikes and of radar and electromagnetic frequencies emitted by surveillance and communications towers upon bats and avifauna is not sufficiently analyzed in the DEA. The potential impact of bird strikes on communication towers and other vertical obstructions is well established in the scientific literature.

Animals, such as migratory birds, bats, and certain fish and insects that are strongly dependent on magnetic fields for orientation or migration are likely to be disproportionately impacted by electromagnetic field (EMF) radiation. (Nichols and Racey 2007) demonstrated that bat activity is reduced in habitats exposed to electromagnetic radiation when compared with matched sites where no such radiation can be detected: “Bat activity was significantly reduced in habitats exposed to an EMF strength of greater than 2 v/m when compared to matched sites registering EMF levels of zero. The reduction in bat activity was not significantly different at lower levels of EMF strength within 400 m of the radar.” Certain electromagnetic frequencies have been documented to irritate bat’s nervous systems, interfere with communicating and flying – such applications are being considered for applications to deter bats away from areas where conflicts with aviation and wind turbines exist (Nichols and Racey 2007) and have also been used in “pest control” applications. It is clear that the best available science was not thoroughly investigated with regard to this impact in the DEA.

The DEA must analyze the potential impacts given the context of the proposed equipment, site locations, species, etc. The following are a few examples:

"Interaction of electromagnetic fields and living systems with special reference to birds" (Bigu 1973). In this study, the mortality rate of the radiated colony was almost double that of the control colony.

"Effects of microwave radiation on Parakeets in Flight" (Tanner 1969). The results obtained in this experiment indicates that microwave radiation has an aversive effect on birds in flight comparable to that previously observed in caged birds.

"Thermal Effects of Short Radio Waves on Migrating Birds" (Kleinhaus et al. 1995). This study concluded that large birds landing on antenna structures might become vulnerable to overheating, but it is likely that these birds would depart rather than remain where they are uncomfortably hot.

One of the few scientific review articles published on the environmental impacts of electromagnetic frequencies is "Health and safety implications of exposure to electromagnetic fields in the frequency range 300 Hz to 10 MHz. (Litvak, Foster and Repacholi 2002). Much information in the gray literature, specifically in other Environmental Assessments and Environmental Impact Statements for communication towers and other vertical obstructions such as wind turbines, are not sufficiently referenced in the DEA. The DEA is sorely insufficient with regard to assessing the impacts of communication and surveillance towers, emitting various EMF frequencies, most of which are proposed to be located in sensitive wildland environments. Most importantly, the DEA fails to include any information regarding the EMF or RF energy strength of the proposed tower's equipment, which is a key determinant in assessing the level and proximity within which the environment will be impacted for sensitive species.

There is one reference to a "safe operating distance for these systems (*i.e.*, 17 feet)", but the basis for this is distance is not quantified, nor substantiated. While humans and terrestrial animals will likely stay out of this proximity due to fences and the height of equipment, both

birds and bats will almost certainly come within 17 feet of tower equipment on a regular basis. Given that such little research has been done to quantify impacts of such invisible emissions upon birds and bats, and the one and only attempt to substantiate the above claim of insignificance is based upon a workshop presentation given nearly a decade ago "(Beason 1999 -not a peer-reviewed journal article), the statement that the proposed towers would not result in significant adverse impacts to the biological environment is baseless. This "invisible" potential impact merits further scientific study, which should be funded by DHS and cooperating agencies via mitigation money, and highlights the importance of locating towers well away from known avian nests, flyways, bat roosts and foraging areas.

## **Conclusion**

While the nature of the impacts of remote surveillance towers are likely to be less for terrestrial species than tactical infrastructure such as border walls, there are numerous potential impacts of the proposed Tohono O'odham IFT Tower Project that have been ignored, or only briefly mentioned, and may disproportionately impact species of flight. The formal opposition of the Gu-Vo District to the Integrated Fixed Towers on the Tohono O'odham Nation should stop the project until the local communities' concerns are adequately addressed by DHS.

The potential environmental impacts, direct, indirect, and cumulative, of the proposed action are significant enough both in scale and in terms of their ecologically-sensitive locations, to merit a regional EIS with alternatives that include various tower array locations and configurations. The minimalist approach DHS has taken, to conduct piecemeal EAs with FONSI on projects to build extensive mileages of border walls vehicle barriers, patrol and access roads, and surveillance towers is unacceptable and in violation of NEPA, plus it has undermined DHS'/CBP's own ability to comprehend the full magnitude and nature of its numerous actions upon the human environment.

Surveillance infrastructure comes with its own set of potential impacts, both direct and indirect, which must be properly assessed and mitigated for. We continue to see the potential for remote surveillance towers to capture information identifying wildlife of conservation concern. This potential benefit to science and wildlife conservation was not addressed in the DEA. We hope that if detected, such information will be shared with wildlife management agencies, researchers and concerned non-governmental organizations. Such information is valuable in building our collective understanding of the occurrence, distribution and

movements of wildlife in the remote borderlands region.

Sincerely,

Dan Millis

Borderlands Campaign Organizer

Sierra Club

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Dan Millis

Sierra Club Grand Canyon Chapter  
Program Organizer, Borderlands and Beyond Coal

[REDACTED]

[REDACTED]

**From:** [Mary Jean Mulherin](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Comment  
**Date:** Monday, May 16, 2016 10:29:37 AM

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I am appalled that the US government would move forward with this given the fact the people whose lands you would propose to build on have categorically refused this effort on your part. This is called "white supremacy" and as a citizen I am very concerned with the direction our country is moving in. I will alert my Senators to my concerns.

Mary Jean Mulherin



**From:** [peter\\_ragan](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation  
**Date:** Tuesday, May 17, 2016 12:02:22 AM

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Peter Ragan  


May 16, 2016

Mr. Paul C. Schmidt  
CBP

Dear Mr. Schmidt,

These comments are regarding the Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation. Placing these towers on the Nation will in fact have a significant negative impact. The EA states that the tower footprints will directly impact 8.23 acres of previously undisturbed land and the improvement of approach roads will permanently impact up to 214.2 acres of previously undisturbed land. Just because there are no historic designations on the land does not mean they are not historic- the entire Nation is a historic site, not only to the people who live there but to all of us, whether we recognize it or not. Is it really reasonable to assert that no significant impact will result to sacred and ceremonial places, to burial grounds and ancient cultural sites from disturbing 225 or more acres of undisturbed land in a place where the inhabitants and their ancestors have lived for thousands of years? Tohono O'odham people have told me that one tower site is at a burial ground and another is at a traditional saguaro fruit gathering place. A finding of no significant impact is oblivious to the cultural traditions of the entire Nation.

The Draft EA says that the proposed action "may affect but is not likely to adversely affect" federally listed species. Listed species such as the sonoran pronghorn and the jaguar and lesser long nosed bat are struggling to survive in the area. How many more invasive actions that "may affect" them can they take? An accounting of cumulative impacts and future related impacts is needed but absent.

The Draft EA says that the current knowledge of microwave emissions result in an expectation of minor impacts to wildlife. Is there current knowledge of the impacts of large areas of overlapping microwave emissions on struggling native bee populations and bat populations? Current knowledge is inadequate.

The people of the Gu-Vo District of the Tohono O'odham Nation have taken the position of no IFTs whatsoever. Their authority in their own Nation should be respected. The rights of the O'odham people to protect and preserve their heritage and their land for themselves and future generations should be respected. These towers should not be placed on the Tohono O'odham Nation.

Thank You,

Peter Ragan

**From:** [Carlton](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation  
**Date:** Sunday, May 15, 2016 9:50:17 PM

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I am writing to urge you NOT to place towers on Tohono O'odham nation. You must respect the will of the Tohono O'odham nation to not have these towers on their land. Respect the Gu-Vo District position of "NO IFTs whatsoever."

Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places. Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.

Thank you,

Carly Rexroad



**From:** [Kelly](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Draft EA and Draft FONSI for integrated fixed towers on the Tohono O'odham nation  
**Date:** Sunday, May 15, 2016 10:50:58 PM

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I am writing to urge you NOT to place towers on Tohono O'odham nation. You must respect the will of the Tohono O'odham nation to not have these towers on their land. Respect the Gu-Vo District position of "NO IFTs whatsoever."

Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places. Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.

Kelly Rexroad



**From:** [Reynolds](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** "Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation."  
**Date:** Monday, May 16, 2016 9:50:54 AM

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I am commenting on the proposed "Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation." I have camped and traveled along many of the 8000 miles of "administrative roads" along the border in Southern Arizona and I think these towers are a solution looking for a problem. The environmental damage done by the US Border Patrol rivals the damage done to the civil & human rights violations that have become the American over reaction to the terrorism threats and illegal immigration. We are trending rapidly towards fascism, just like Israel. Stop now before it is too late.

Jason C Reynolds



**From:** [Sarah Roberts](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Surveillance towers draft EA - Tohono O'odham land  
**Date:** Sunday, May 15, 2016 11:48:58 PM

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To Mr. Paul Schmidt,

I am writing to you regarding the Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation. The towers will destroy Tohono O'odham land by creating many new roads across the districts, as well as allow access to and destroy native sacred sites. Roads built for BP use currently are known to destroy the Sonoran desert. As well, it is well-documented that US BP agents violate the civil rights of native people on their land.

The towers are to be built by ELBIT Systems, an Israeli company responsible for surveillance and oppression of Palestinian communities. The responsible approach would be to boycott Israeli companies, not invite them to destroy native people's sacred land. The responsible approach would be to respect the native lands and the Sonoran desert.

Thank you,  
Sarah Roberts  
Southern AZ BDS Network



**From:** [margarita\\_sanchez](mailto:margarita_sanchez)  
**To:** [OTIAENVIRONMENTAL](mailto:OTIAENVIRONMENTAL)  
**Cc:** [4oodhamrights@gmail.com](mailto:4oodhamrights@gmail.com); [+Censored News-Mohawk](#)  
**Subject:** Comments: "Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation."  
**Date:** Saturday, May 14, 2016 5:42:40 PM

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Re: "Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation."

**... NO ITFs !!! ... NO ITFs WHATSOEVER !!! ...  
RESPECT O'ODHAM MEMBERS !!!**

1. Support and acknowledge the Gu-Vo District as O'odham Authority, voice of O'odham Community and Community Members.
2. Support and respect Gu-Vo District's actions to protect and preserve Sacred Places, and Buriel Place, and Ancient Village Places.
3. Support and respect Gu-Vo District's efforts to protect Future Generations.
4. Support and respect Gu-Vo District's position of "No IFTs whatsoever".

Margarita Sanchez



**From:** [Gabriel Schivone](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** public comment Re: Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation.  
**Date:** Sunday, May 15, 2016 10:30:07 PM

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Attn: Paul C. Schmidt or to whom it concerns:

As an Arizona native I urge you NOT to build or otherwise place IFTs on O'odham lands. The Gu-District as legitimate and representative community voices oppose IFT placement due to ancestral locations of burial, ceremony and communities, please respect that as well as their voices and wishes to preserve future generations' welfare.

Thank you,

Gabriel M Schivone



**From:** [Douglas Schnare](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation."  
**Date:** Monday, May 16, 2016 7:17:11 PM

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Dear sirs:

You should work with the tohono o'oadham nation. They have many burial grounds and sacred sites on their land which should be respected. Your work is important to the country but it must be done with minimum impact on the TO nation. How does it effect the people of the nation, both young and old?

Douglas Schnare



Sent from my iPad

**From:** [Sophie Smith](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation  
**Date:** Monday, May 16, 2016 10:31:26 AM

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Sophie Smith

Comments for Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation

To whom it may concern:

I am writing in support of "Alternative 1" for the proposal to build IFT towers on the Tohono O'odham Nation. As traditional tribal lands with many sacred sites, including unmarked burial sites, it is clear that the construction of these towers will cause significant desecration and, in turn, represent a serious violation of tribal sovereignty. In addition, the construction of new roads in these remote wilderness roadless areas will cause serious harm to the desert ecosystems that have thrived on the nation for thousands of years. Many of these regions are used for traditional practices, such as saguaro fruit harvesting--practices that will be altered or disabled by the presence of permanent surveillance infrastructure and border enforcement personnel in these territories. Furthermore, I believe that there has not been adequate research conducted to demonstrate that the radiation/waves emitted by these long-range surveillance towers do not disrupt bird and insect migration patterns in these vital corridors--migrations that significantly effect the ability for the O'odham people to live off of the land and for the maintenance of precious biodiversity in the region.

For this reason, I ask that DHS review and cancel its plan to build these IFT towers on the Tohono O'odham Nation.

Sincerely,  
Sophie Smith

**From:** [Dan Todd](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation  
**Date:** Saturday, May 14, 2016 12:35:14 AM

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Dear Mr. Paul Schmidt:

My name is Dan Todd and my address is [REDACTED]

I write to oppose the construction of the proposed Integrated Fixed Towers on the Tohono O'odham Nation.

Seven of these towers would be in the district of Gu-Vo (Big Pond), the westernmost district of the Tohono O'odham Nation. The Gu-Vo Governing Council said No to the proposed construction of these Integrated Fixed Towers (IFT) in the Gu-Vo District.

Accordingly, I urge you to

- Respect the Gu-Vo District position of NO IFTs whatsoever.
- Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places.
- Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.
- Respect the Gu-Vo District's efforts to protect future generations.

As a long-time resident of the Sonoran Desert, I believe such intrusive constructions serve no constructive purpose whatsoever and have no place here, in addition to the more important opposition of people who have lived here for thousands of years.

Thank you for your consideration.

**From:** [Timothy Wickland](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation  
**Date:** Sunday, May 15, 2016 9:28:47 PM

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To whom it may concern:

My name is Timothy Wickland. I am a US citizen and taxpayer residing in [REDACTED]  
[REDACTED] I am writing to encourage you to reject construction of Integrated Fixed Towers (IFT) in the Gu-Vo District. Please:

- Respect the Gu-Vo District position of NO IFTs whatsoever.
- Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places.
- Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.
- Respect the Gu-Vo District's efforts to protect future generations.

I urge you to not allow construction of any Integrated Fixed Towers.

Thank you

Timothy Wickland

**From:** [randy williams](#)  
**To:** [OTIAENVIRONMENTAL](#)  
**Subject:** Draft EA and Draft FONSI for Integrated Fixed Towers on the Tohono O'odham Nation" and tell the U.S. Customs and Border Protection to respect indigenous demands to protect their land and sacred places.  
**Date:** Monday, May 16, 2016 7:18:45 AM

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Respect the Gu-Vo District position of NO IFTs whatsoever.  
Respect the Gu-Vo District's actions to protect and preserve sacred places, ceremonial places and burial place and ancient village places.  
Respect the authority of Gu-Vo District as O'odham authority, voice of O'odham Communities and community members.  
Respect the Gu-Vo District's efforts to protect future generations.

Sincerely  
Randy Williams



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**APPENDIX B**  
**CONCEPTUAL FIELD LAYDOWNS**



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Tower Number	Common Name	Latitude	Longitude	Type
<b>December 2009</b>				
AJO-133	FR 1 North	32.20650	-112.57124	Preferred
AJO-172	Chukut Kuk C1	32.22805	-112.71815	Preferred
CAG-018	Nelson Well	31.7141	-112.15772	Alternate
CAG-020	San Rafael	31.69764	-112.05615	Preferred
CAG-021	Alvarez West	31.76338	-112.0023	Preferred
CAG-024	P-28-1	31.58339	-111.76992	Preferred
CAG-026	P-28-2	31.54353	-111.70817	Preferred
CAG-097	Singing Saquaro	31.7489	-112.113	Preferred
CAG-134	FR 42	32.54693	-112.0079	Preferred
CAG-220	LOS Relay	31.57316	-111.72539	Alternate
CAG-259	Vamori	31.69887	-111.95854	Rejected
CAG-260	San Miguel	31.61499	-111.76323	Alternate
CAG-261	Itak	31.66144	-111.99009	Alternate
CAG-340	Itak	31.68316	-111.98885	Preferred
CAG-341	Itak South	31.68257	-111.98986	Alternate
CAG-342	Chukut Kuk C7 Alternate	31.74456	-112.09436	Alternate
CAG-343	Onion Stand	31.74934	-112.15552	Preferred
CAG-344		31.63869	-111.77279	Preferred
<b>January 2010</b>				
AJO-095	Papago Farms Relay	31.7645	-112.304	Preferred
AJO-14	Crossover 2	32.04772	-112.38922	Preferred
AJO-15	FR 21	31.82868	-112.32185	Preferred
AJO-16	FR 24 Beacon	31.93987	-112.30745	Preferred
AJO-16 ALT				Alternate
AJO-17	Kupk	31.90068	-112.1841	Preferred
AJO-172	Gunsight	32.22762	-112.71793	Preferred
AJO-174		32.19612	-112.35402	Preferred
AJO-332				Preferred
AJO-333	FR 1 North			Preferred
AJO-345	Rte 86 near IR21	32.18233	-112.33414	Preferred
AJO-346				Preferred
AJO-347				Preferred
CAG-023	Animas South	31.7126	-111.81299	Preferred
CAG-096	Quijotoa	32.1331	-112.16	Preferred
CAG-169	Burro Mountain	31.8696	-111.873	Preferred
CAG-313				
CAG-349	CAG Vehicle Maintenance Facility	32.81949	-111.66908	Preferred
CAG-357	Sif Oidak District off AZ-42	32.69729	-111.94963	Preferred
<b>February 2010</b>				
AJO-9	Gu Vo	32.05169	-112.57714	Preferred
AJO-10	Milepost 7 Road	31.90036	-112.55491	Preferred
AJO-10 ALT 1				Alternate
AJO-10 ALT 2				Alternate
AJO-11	Crossover 1	32.07105	-112.50611	Preferred
AJO-12	Tank	31.86175	-112.47513	Preferred
AJO-93	Siovi	31.95127	-112.59265	Preferred
AJO-132	FR 1 South	32.14418	-112.57963	Preferred
CAG-262	Fresnal Canyon	31.79057	-111.7101	Preferred
CAG-352				
CAG-353				
CAG-351		31.69747	-111.77440	Preferred
CAG-358				
CAG-359		31.80204	-111.71416	Preferred
CAG-356		32.58933	-111.99878	Preferred
CAG-360	Santa Rosa	32.35254	-112.05771	Preferred

<b>Tower Number</b>	<b>Common Name</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Type</b>
<b>June 2011</b>				
AJO-0090	Ajo Station	32.2737	-112.74	Alternate
AJO-0093	Siovi	31.95124	-112.59261	Preferred
AJO-0132	FR-1 South	32.14419	-112.57962	Preferred
AJO-0133	FR-1 North	32.20815	-112.57213	Preferred
AJO-0172	Gunsight	32.22762	-112.71793	Preferred
AJO-0216	Block 1 sensor site	32.20085	-112.76562	Alternate
AJO-0305	Ajo Station	32.27537	-112.73977	Preferred
AJO-0345	TRTE 86 nr IR21	32.18233	-112.33414	Preferred
AJO-0355	nr Gunsight	32.22528	-112.71818	Alternate
AJO-0398	Casino Sign	32.22757	-112.71837	Preferred
CAG-0096	Quijotoa	32.13328	-112.15897	Preferred
CAG-0195	Sacaton Peak	32.81949	-111.66908	Preferred
CAG-0349	CAG Veh Mntc Fac	33.00243	-111.67427	Preferred
CAG-0357	Sif Oidak District off AZ-42	32.69729	-111.94963	Preferred
CAG-0360	Santa Rosa	32.35254	-112.05771	Preferred
<b>July 2012</b>				
CAG-Tower-1	Trading Post and 2 Mile Drag	31.572975	-111.685136	Preferred
CAG-Tower-7	San Miguel LEC/Old P-28 site, at C-2 facility	31.5835	-111.77	Preferred
CAG-Tower-2	Ice Cream Truck Road and Wrap Around Road	31.618347	-111.839197	Preferred
CAG-Tower-3	Wamul, north of Wraparound	31.620689	-111.904731	Preferred
CAG-Tower-3	Dead Cow site	31.657399	-111.911844	Preferred
CAG-Tower-4	Vamori and Itak Rd	31.650981	-111.990342	Preferred
CAG-Tower-5	Tecolote to Torros Road	31.672425	-112.049558	Preferred
CAG-Tower-6	Serapo Road to Onion Stand	31.726358	-112.128244	Preferred
AJO-1ALT3	Secret Hill	31.767216	-112.257308	Alternate
AJO-2ALT3	San Simon Thicket	31.77362	-112.42471	Alternate
AJO-3ALT3	Menegers	31.80844	-112.54179	Alternate
AJO-4ALT3	7/13 South	31.92481	-112.57264	Alternate
AJO-5ALT3	7/13 North	31.97242	-112.58305	Alternate
AJO-6ALT3	MM18	32.05319	-112.57849	Alternate
AJO-7ALT3	Kuacatch	32.134284	-112.64021	Alternate
AJO-8ALT3	Gunsight	32.15936	-112.693212	Alternate
AJO-Tower #1	Secret Hill	31.767044	-112.257378	Preferred
AJO-Tower #2	San Simon Thicket	31.776347	-112.400569	Preferred
AJO-Tower #3	MM3	31.849278	-112.558572	Preferred
AJO-Tower #4	Menagers	31.808964	-112.541986	Preferred
AJO-Tower #5	MM7	31.923808	-112.571256	Preferred
AJO-Tower #6	GuVo Valley	32.036861	-112.56725	Preferred
AJO-Tower #7	Old GuVo	32.084819	-112.641389	Preferred
AJO-Tower #8	Gunsight	32.2083	-112.6852	Preferred
TCA-AJO-0305	Ajo Station Communication	32.27537	-112.73977	Existing
TCA-AJO-0216	Ajo-0216	32.20085	-112.76562	Existing

**APPENDIX C**  
**USBP's AJO AND CASA GRANDE STATIONS' AORs**  
**IFT PROJECT SITES**

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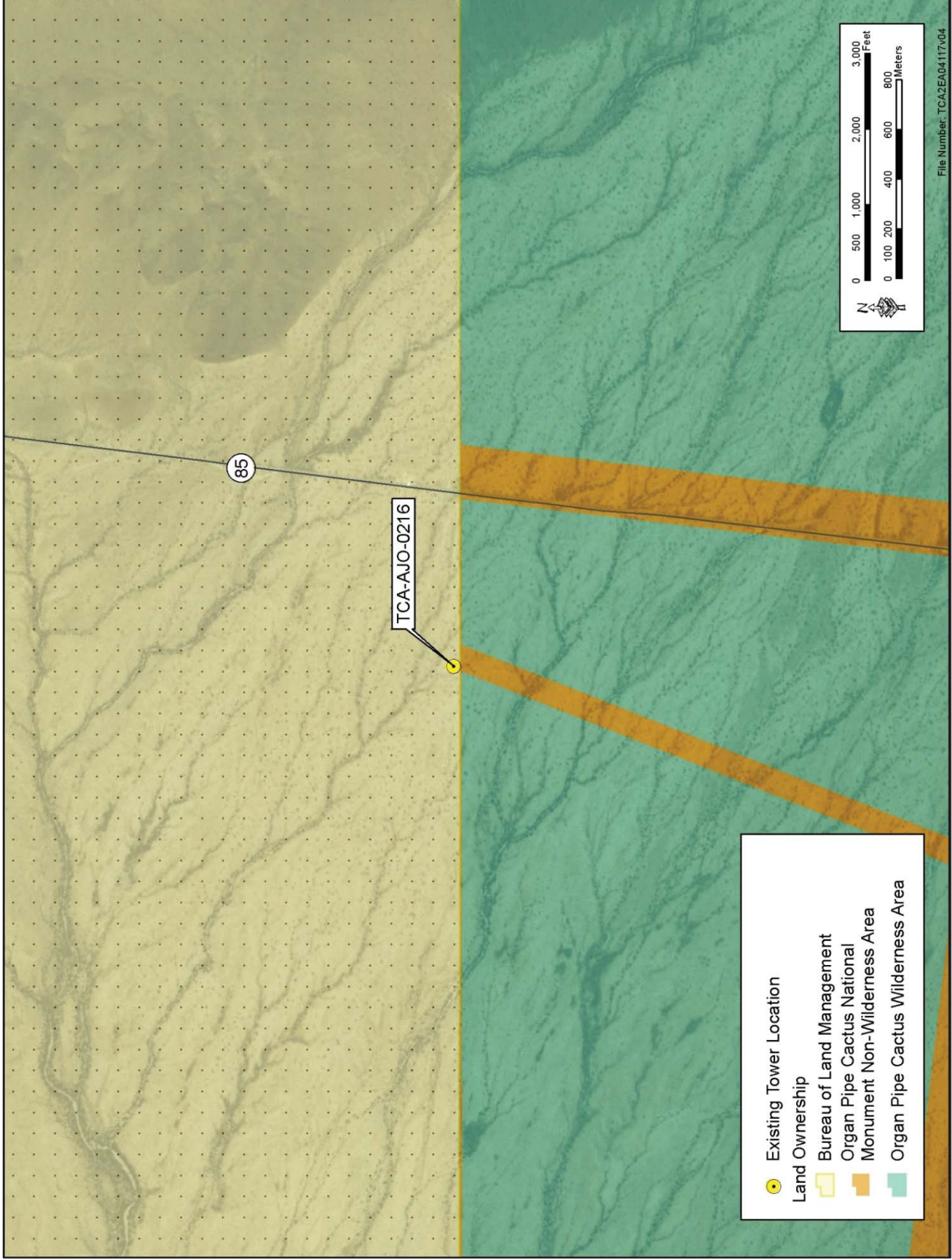


Figure 1. TCA-AJO-0216 Tower Location and Survey Area



Figure 2. TCA-AJO-0305 Tower Location and Survey Area



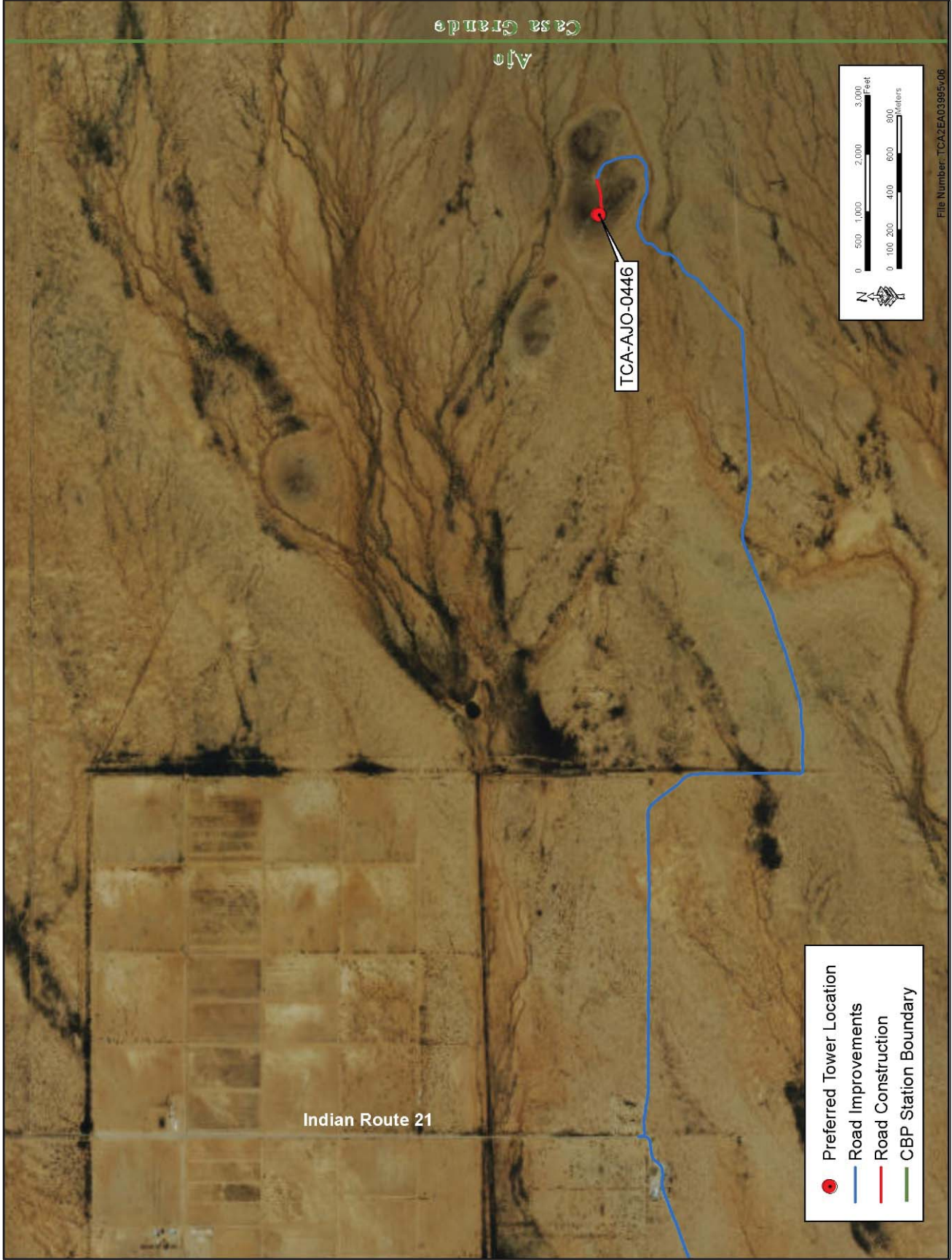


Figure 3. TCA-AJO-0446 Tower Location and Approach Roads

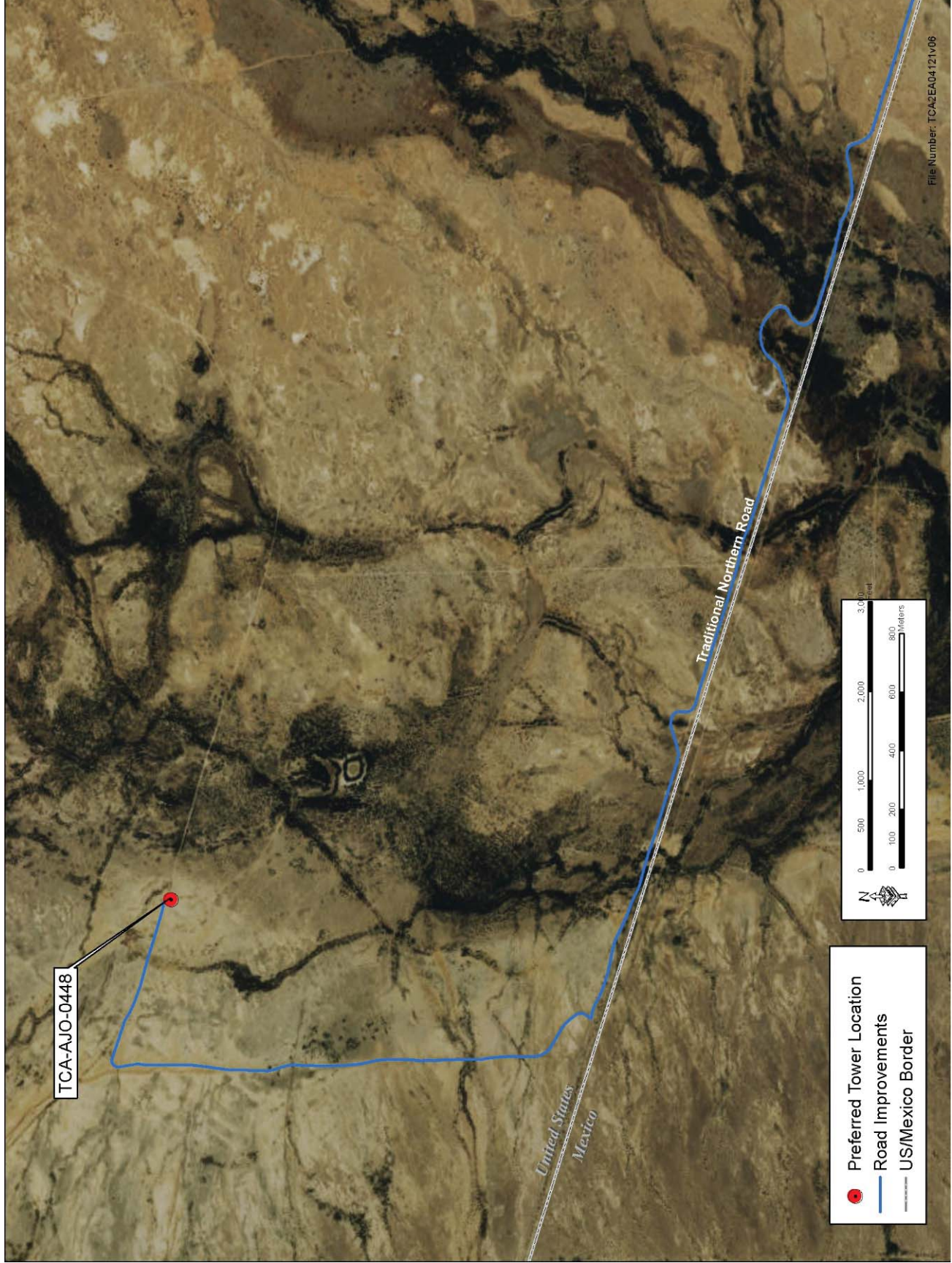
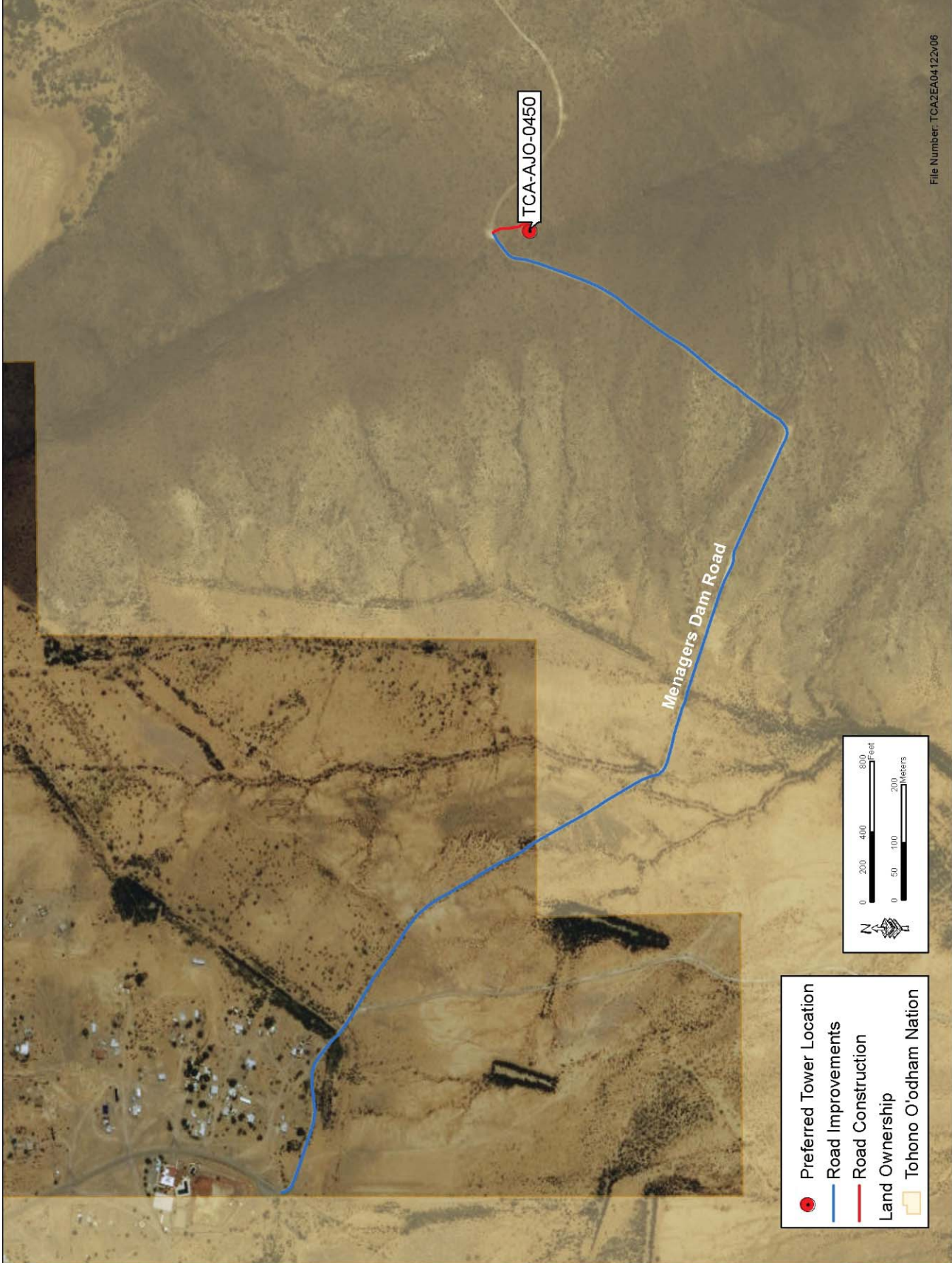


Figure 4. TCA-AJO-0448 Tower Location and Approach Roads



File Number: TCA2EA04125/08

Figure 5. TCA-AJO-0450 Tower Location and Approach Roads



File Number: TCA2EA04123.06

Figure 6. TCA-AJO-0452 Tower Location and Approach Roads

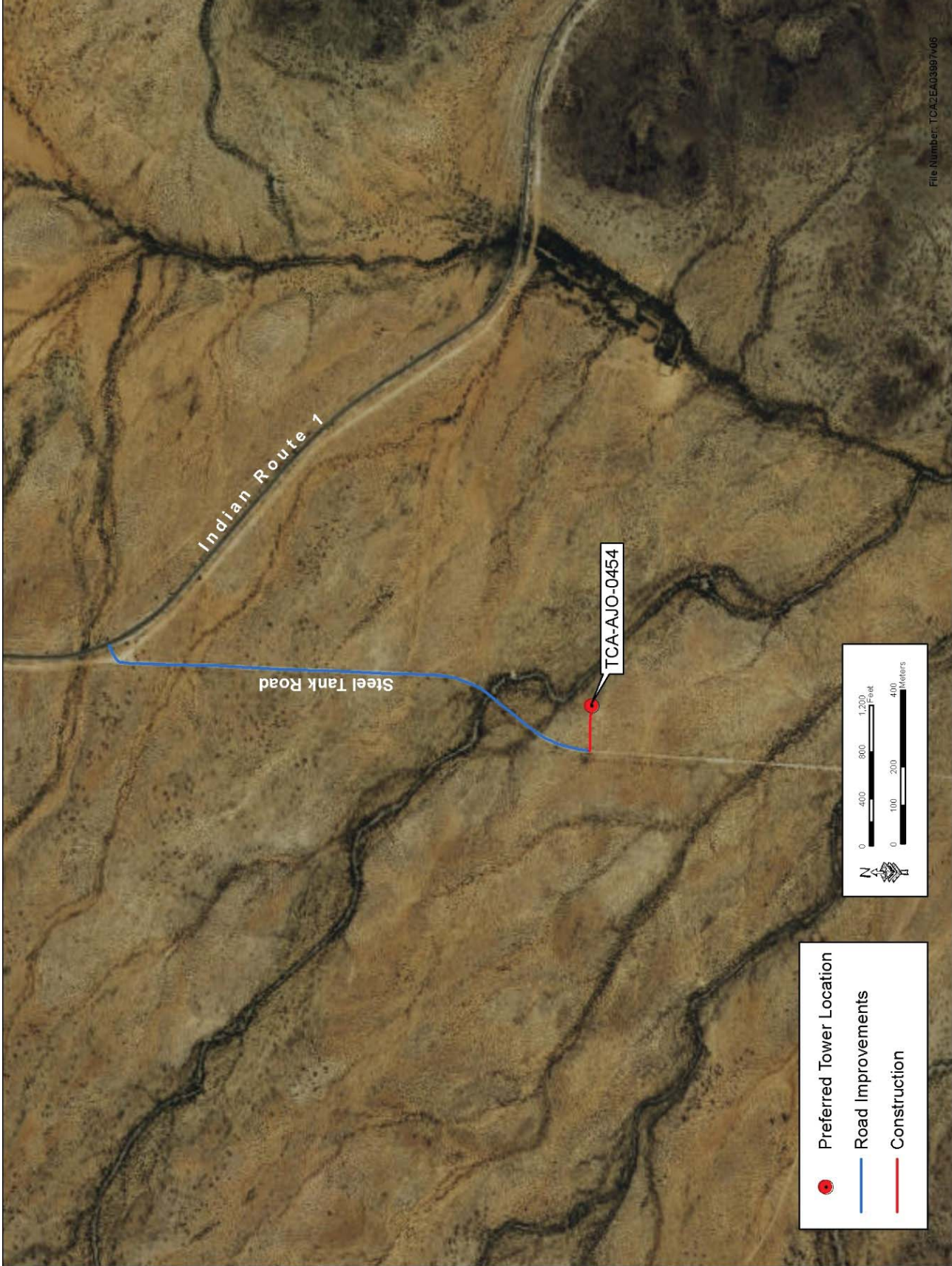


Figure 7. TCA-AJO-0454 Tower Location and Approach Roads



Figure 8. TCA-AJO-0458 Tower Location and Approach Roads

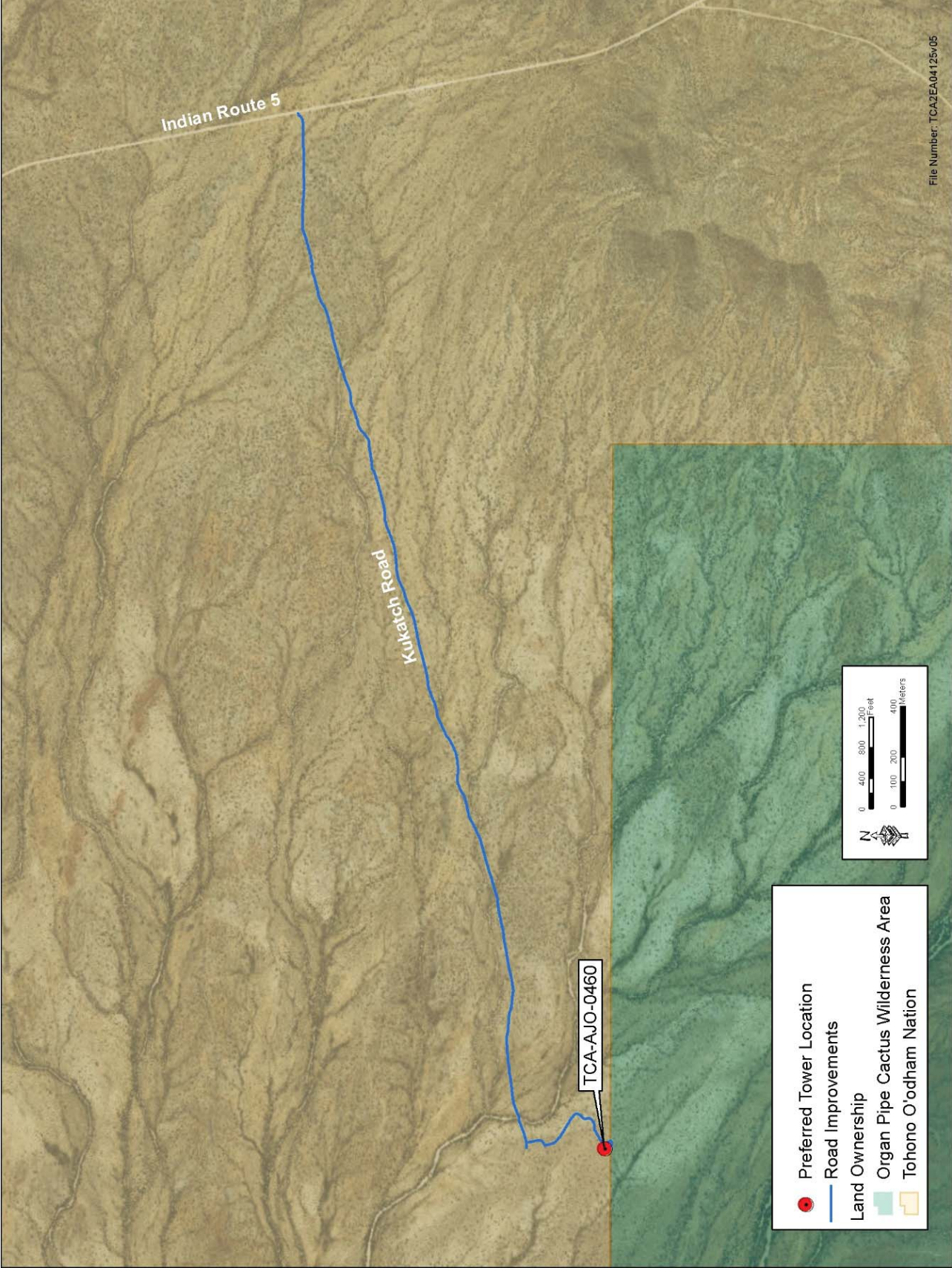


Figure 9. TCA-AJO-0460 Tower Location and Approach Roads

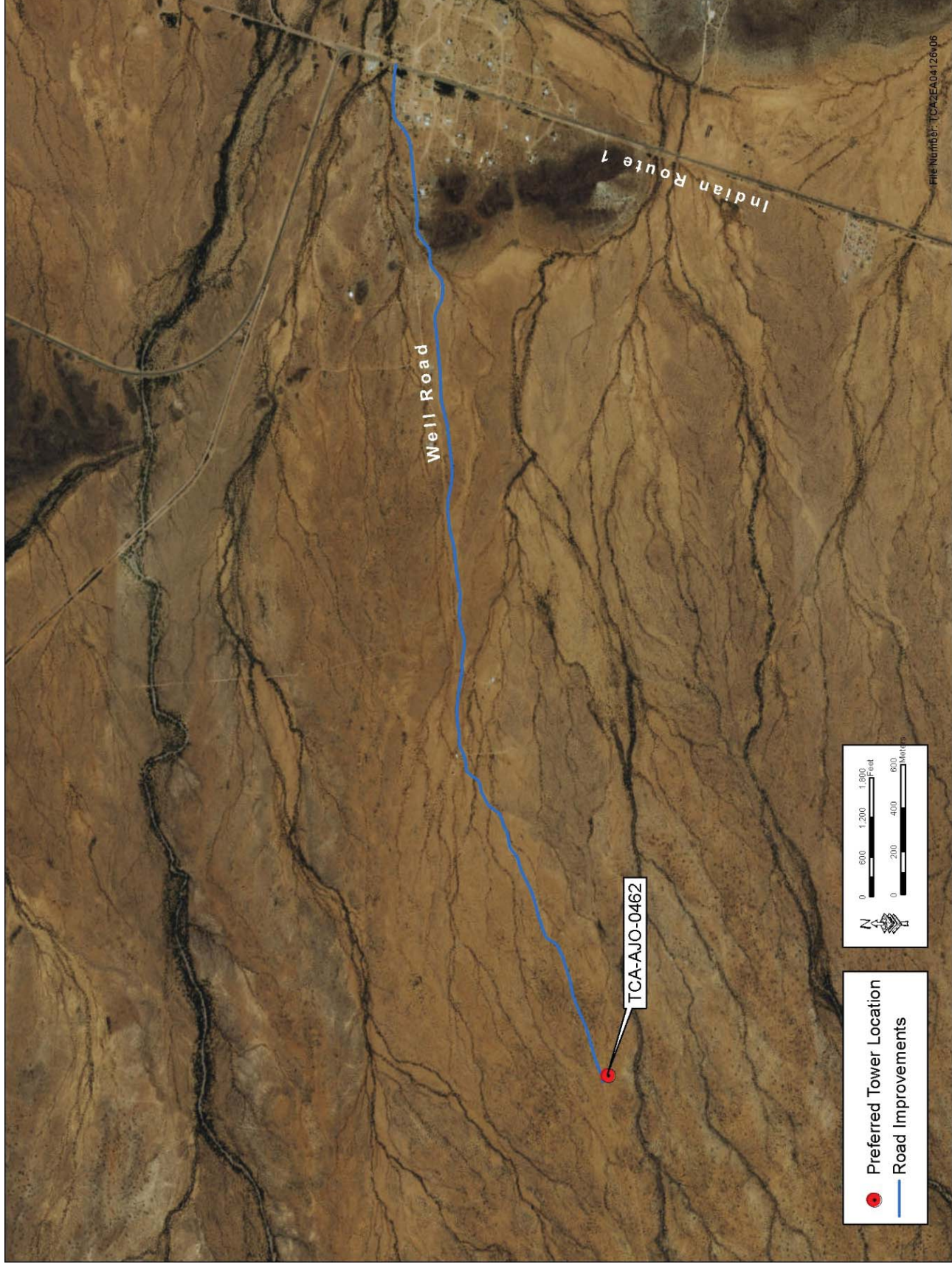


Figure 10. TCA-AJO-0462 Tower Location and Approach Roads



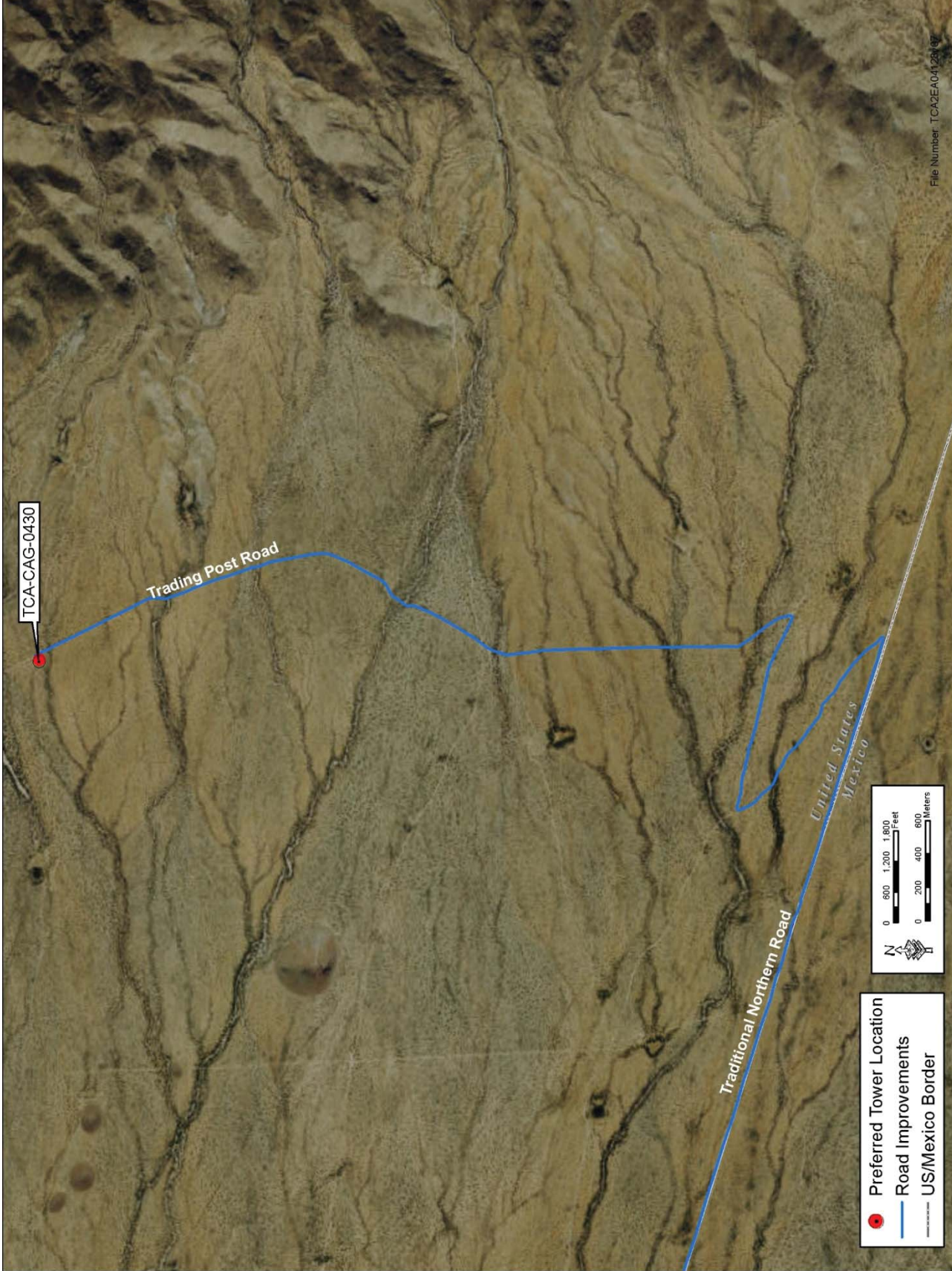


Figure 11. TCA-CAG-0430 Tower Location and Approach Roads

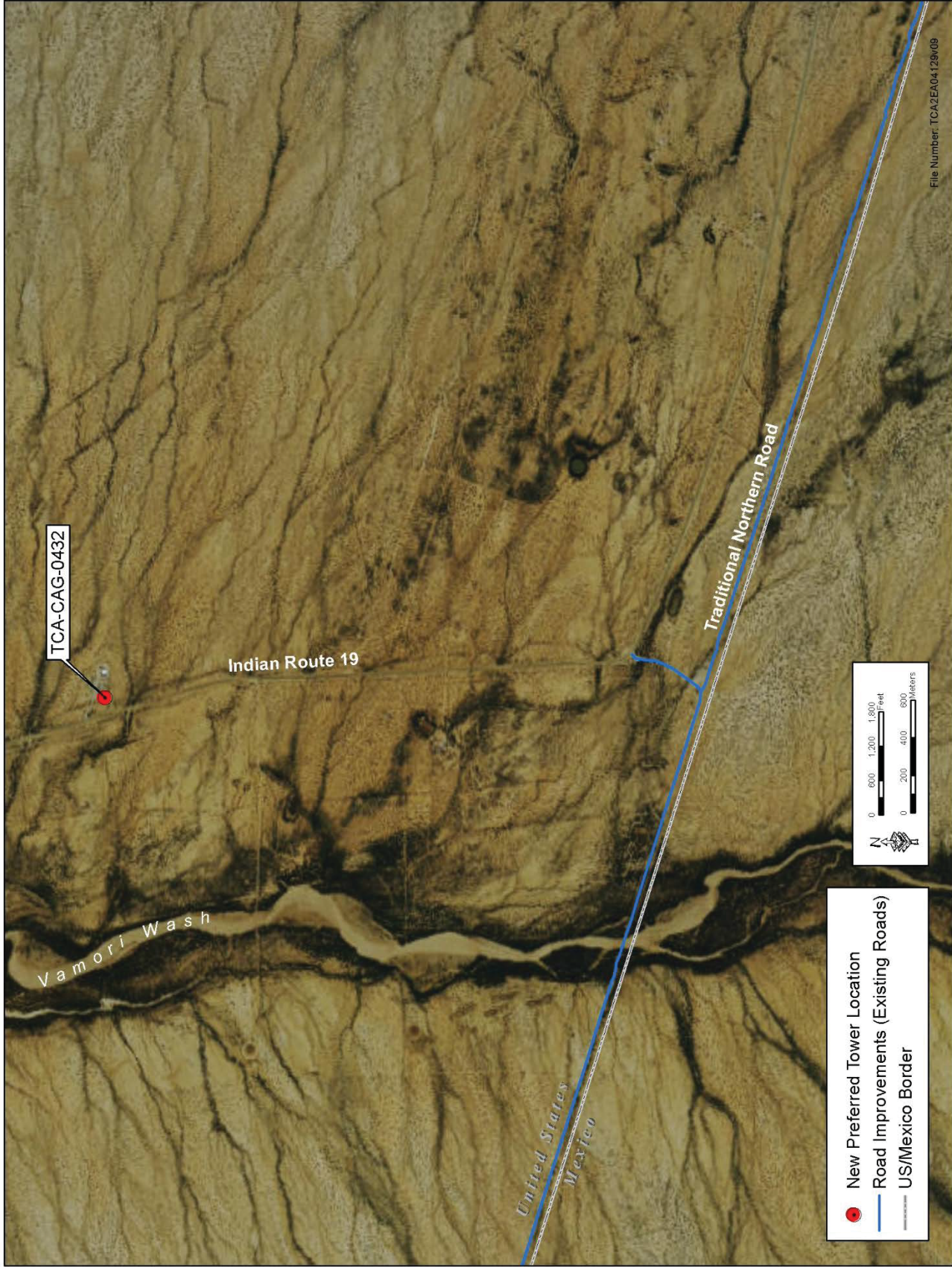


Figure 12. TCA-CAG-0432 Tower Location and Approach Roads

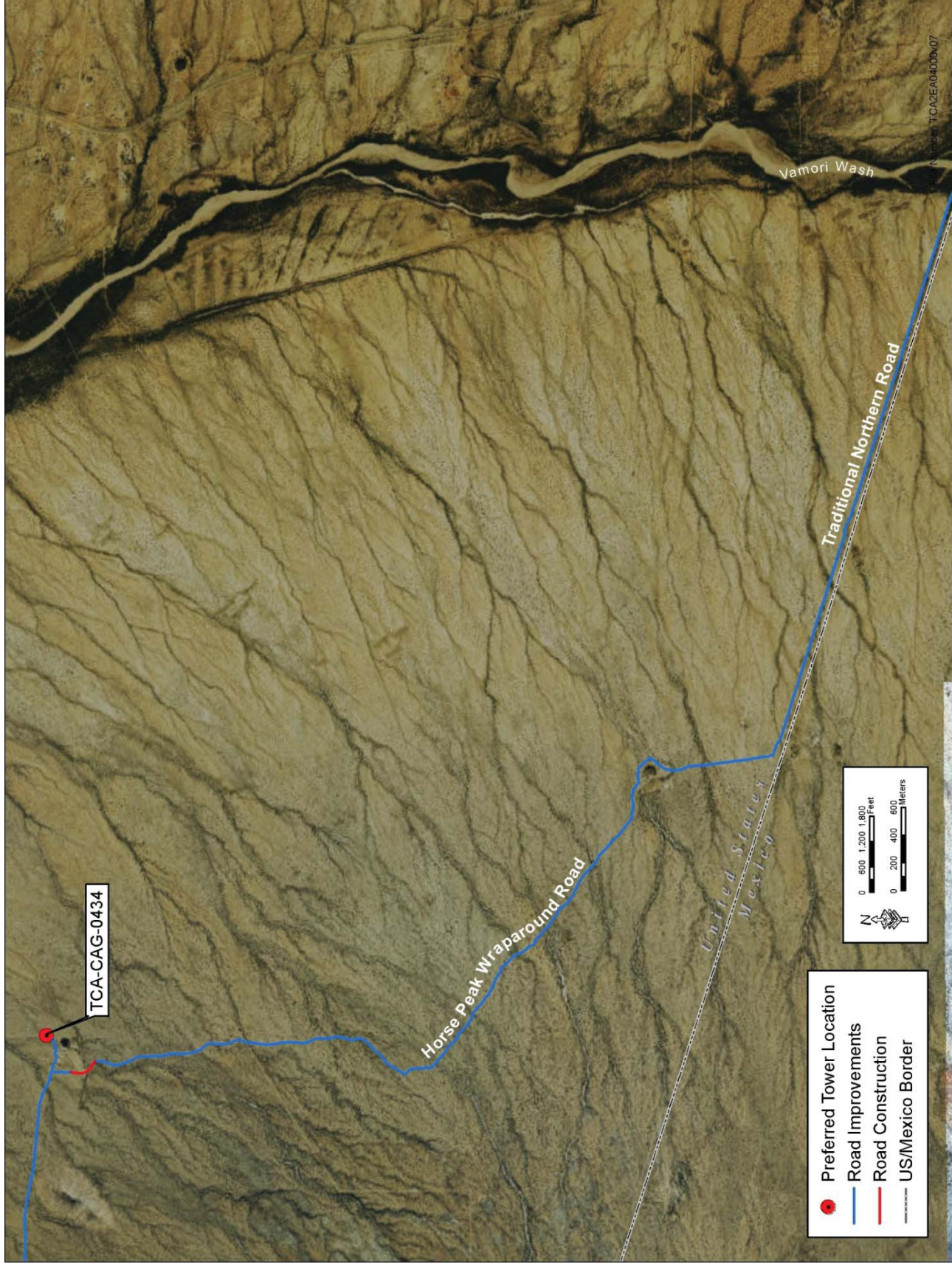


Figure 13. TCA-CAG-0434 Tower Locations and Approach Roads

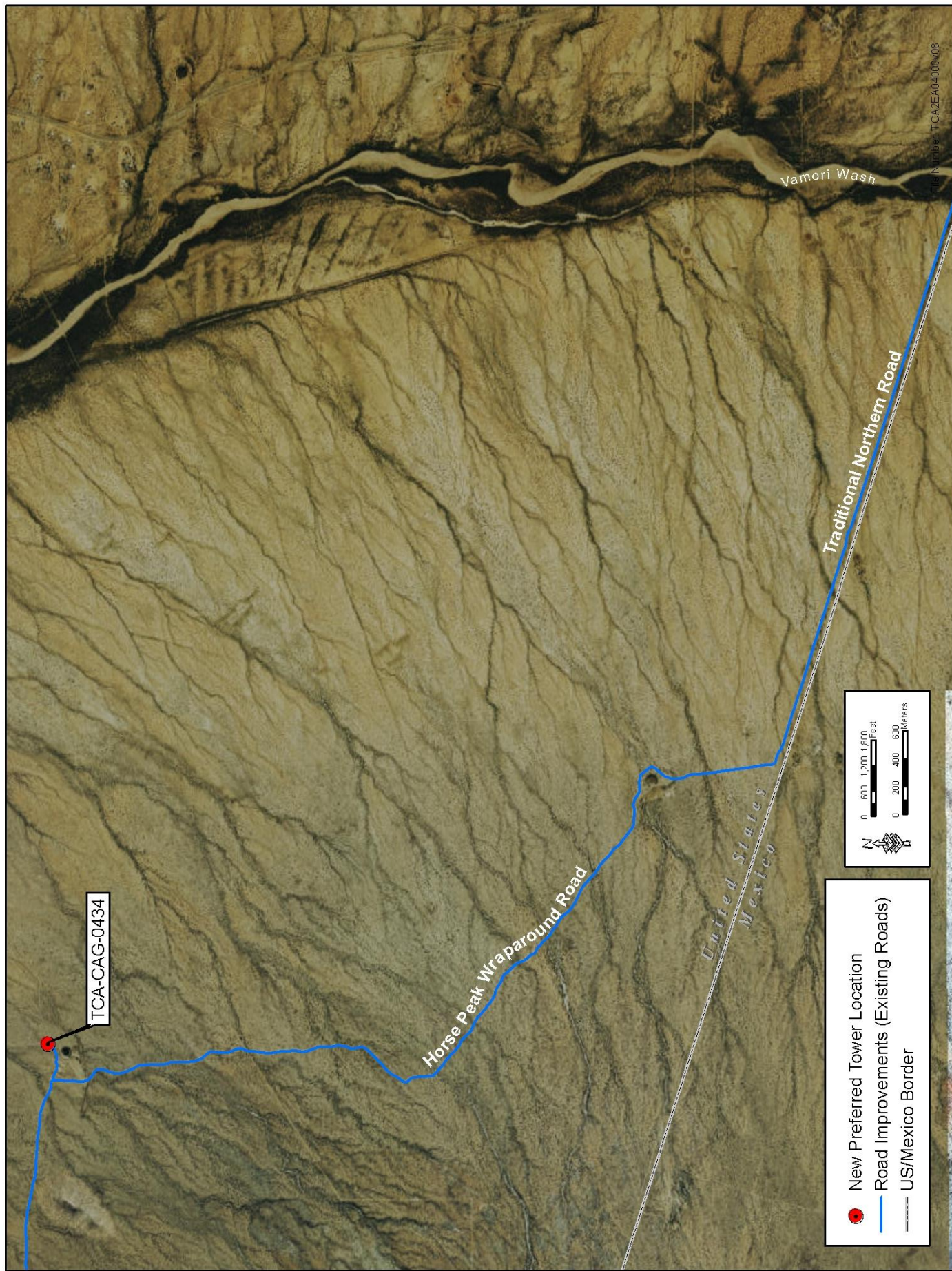


Figure 13. TCA-CAG-0434 Tower Locations and Approach Roads

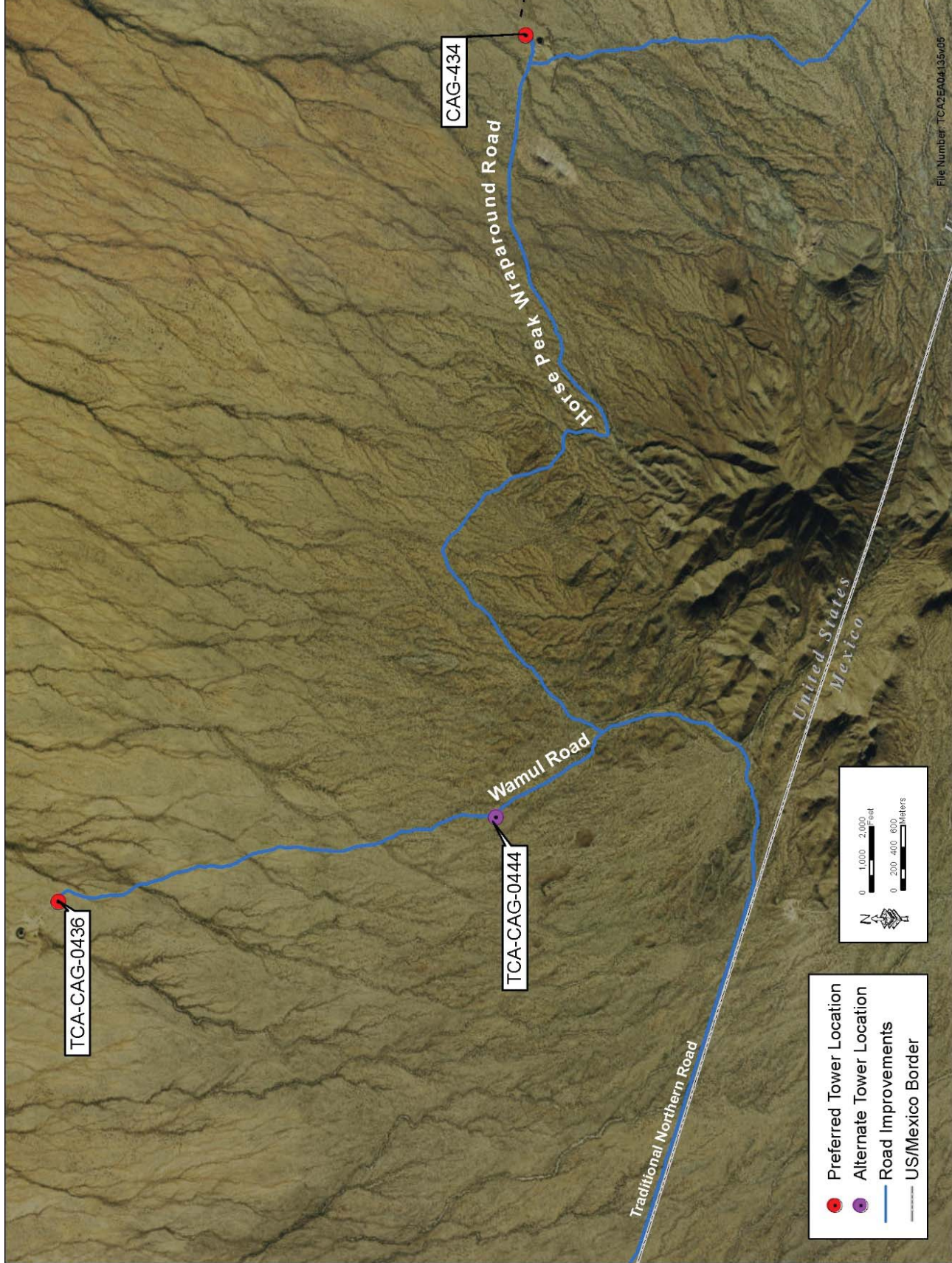


Figure 14. TCA-CAG-0436 and -0444 Tower Location and Approach Roads

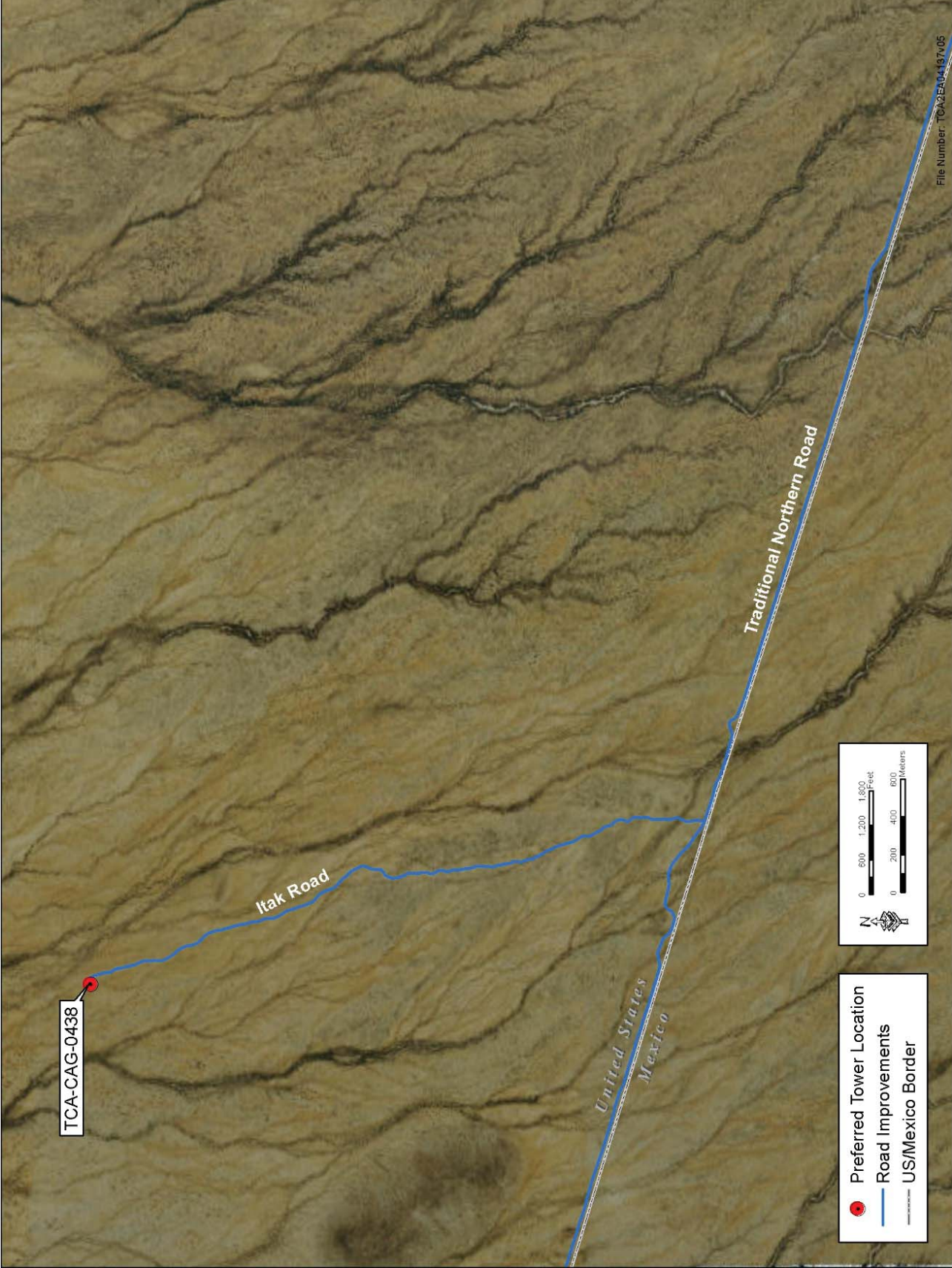


Figure 15. TCA-CAG-0438 Tower Location and Approach Roads

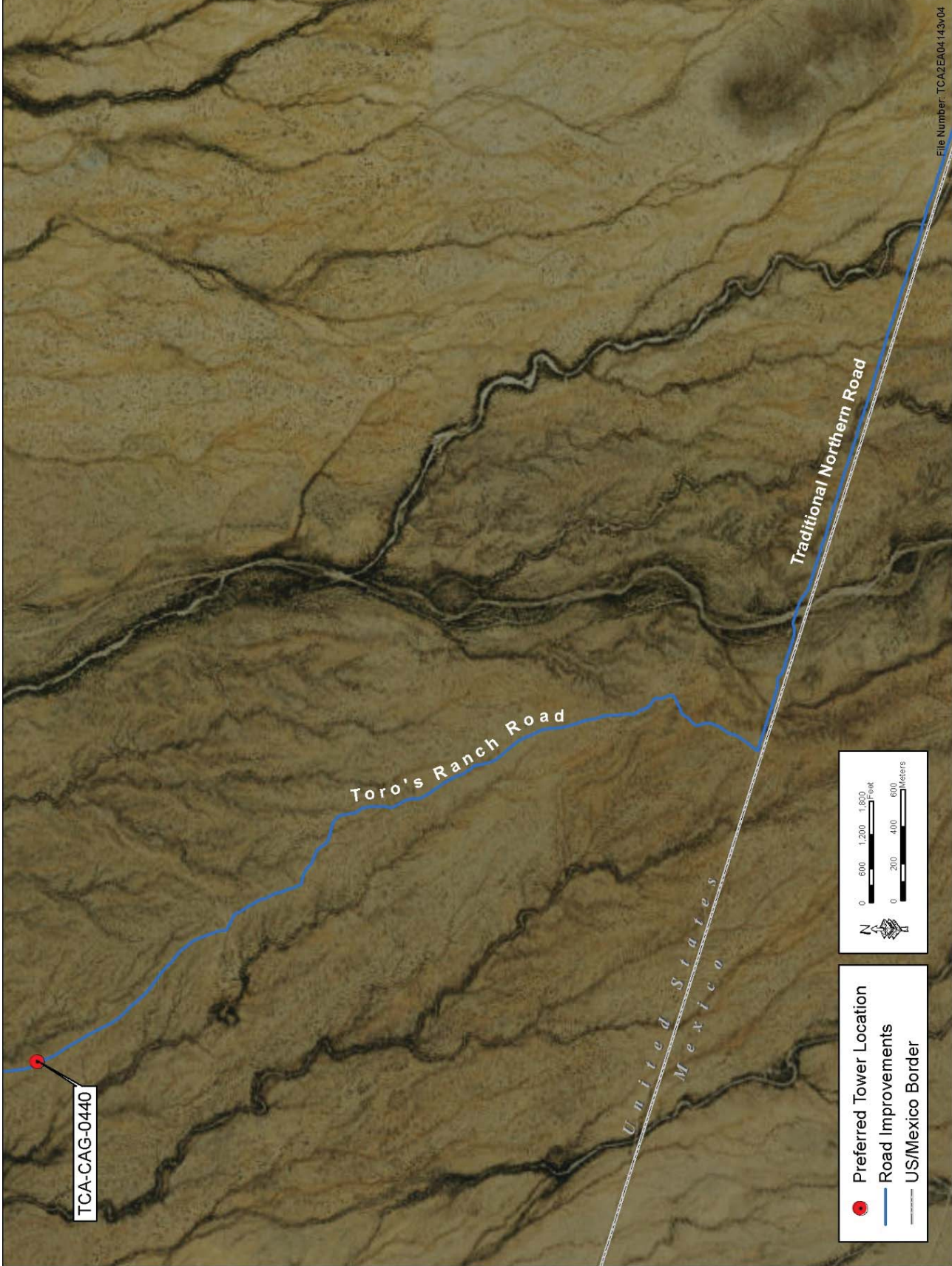


Figure 16. TCA-CAG-0440 Tower Location and Approach Roads



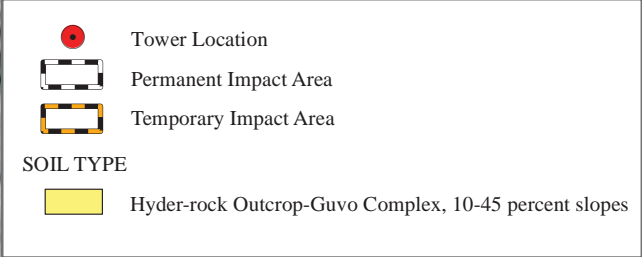
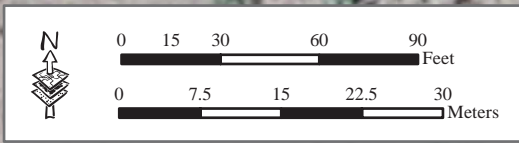
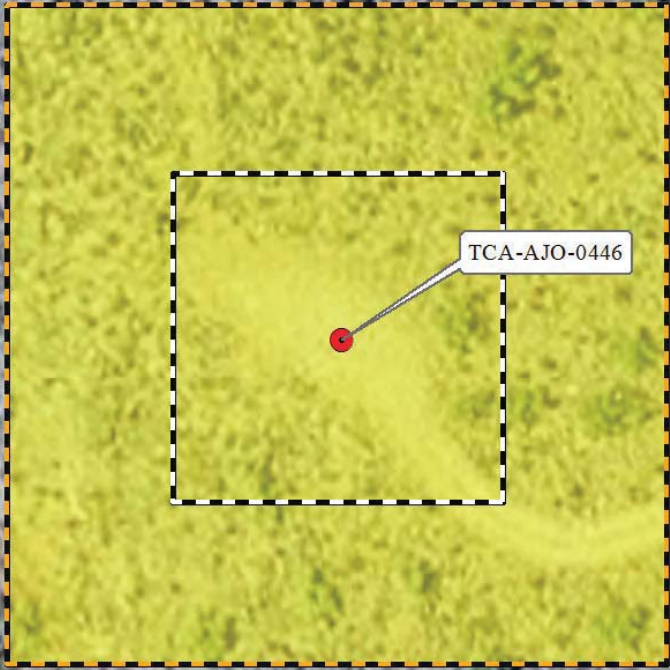
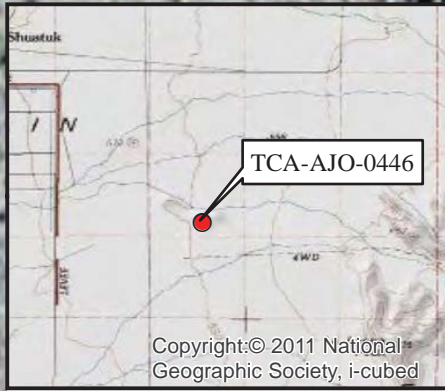
Figure 17. TCA-CAG-0442 Tower Location and Approach Roads



**APPENDIX D**  
**SOIL MAPS**



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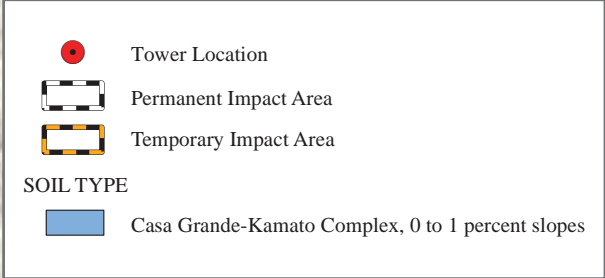
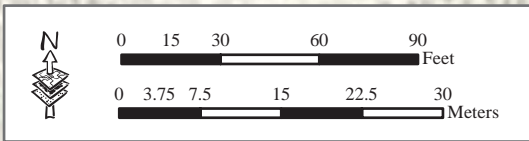
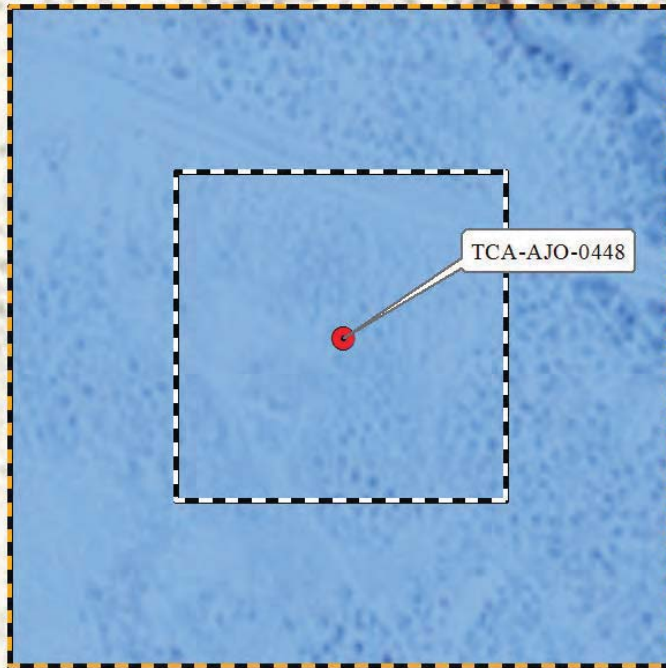
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TCA-AJO-0446 Soil Map

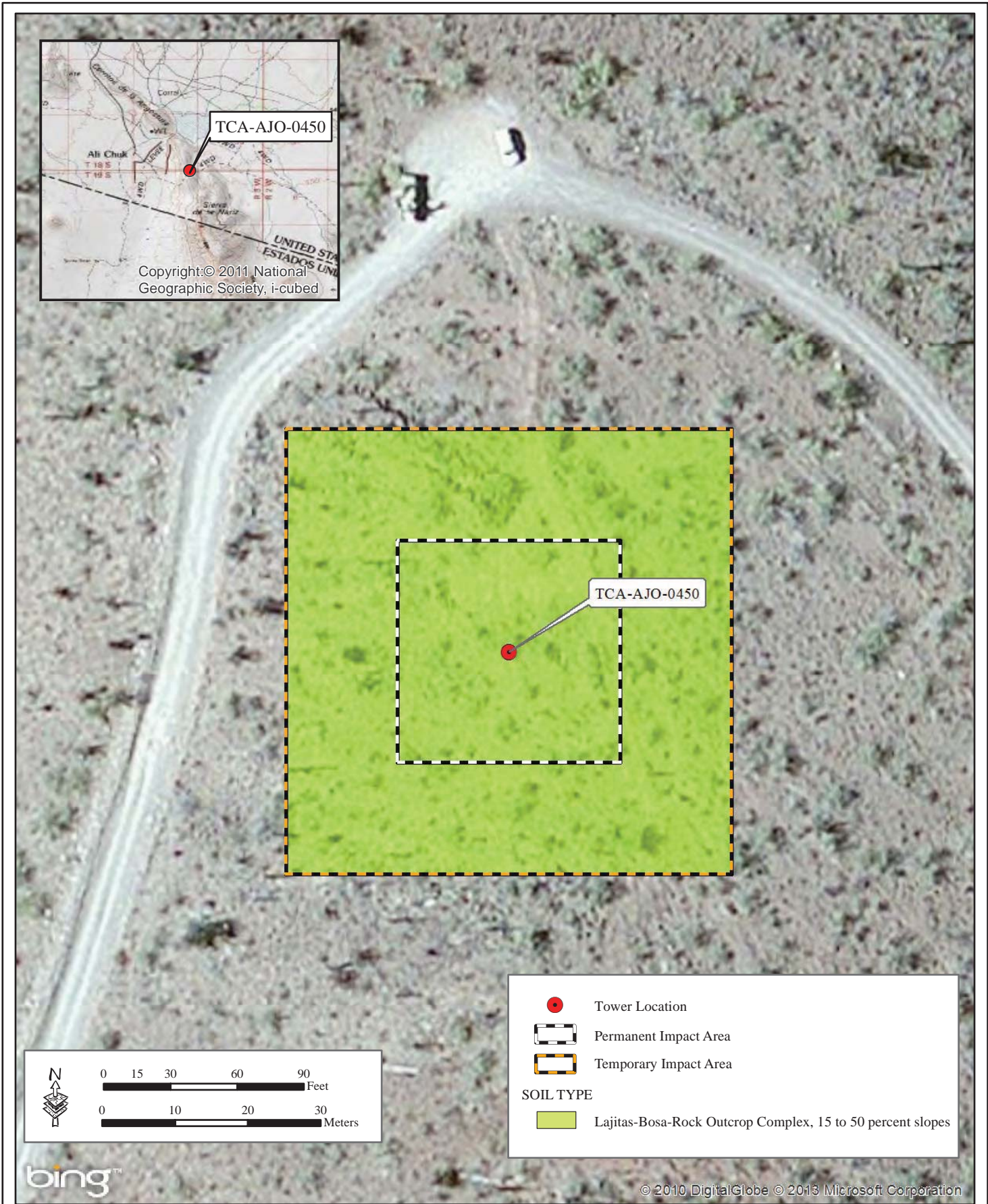


March 2013

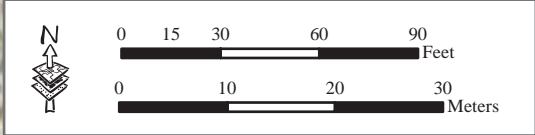
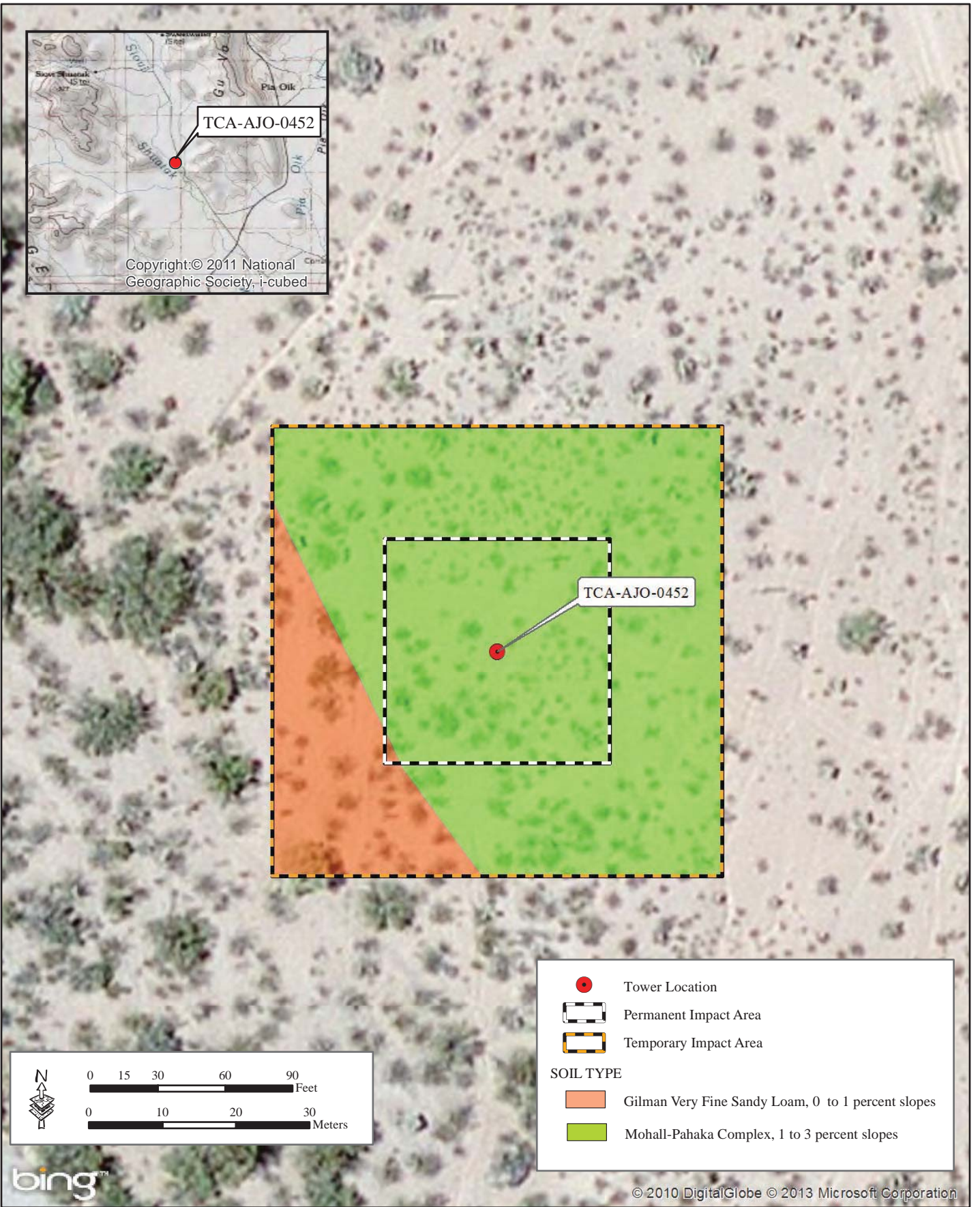





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TCA-AJO-0450 Soil Map



-  Tower Location
-  Permanent Impact Area
-  Temporary Impact Area

**SOIL TYPE**

-  Gilman Very Fine Sandy Loam, 0 to 1 percent slopes
-  Mohall-Pahaka Complex, 1 to 3 percent slopes

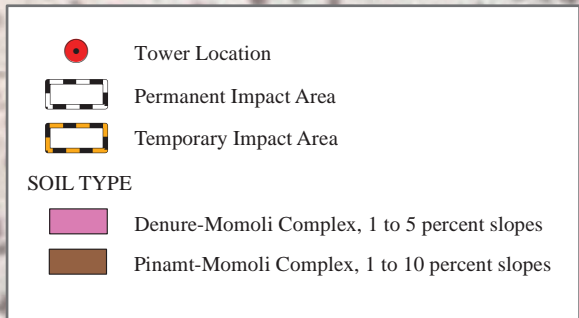
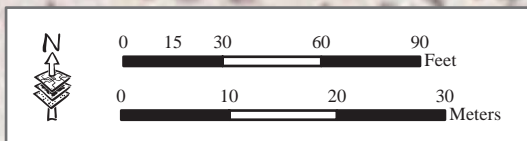
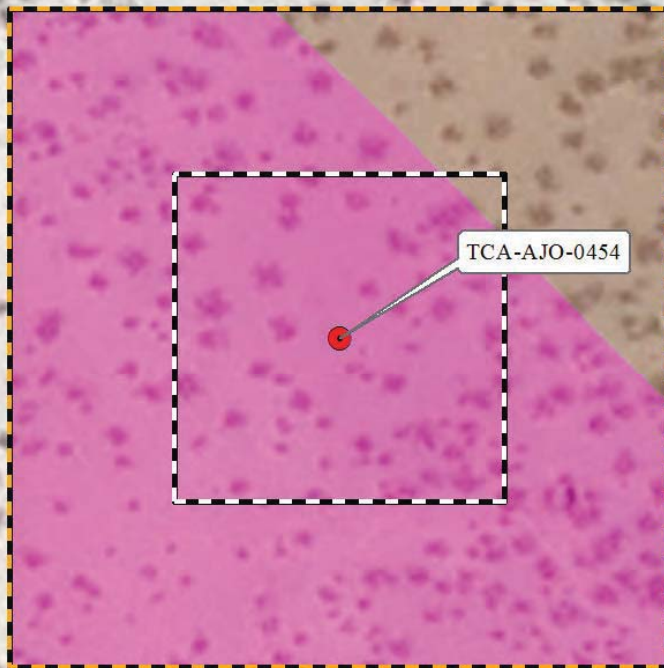
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TCA-AJO-0452 Soil Map



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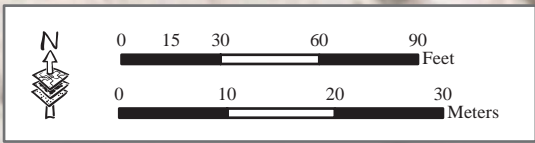
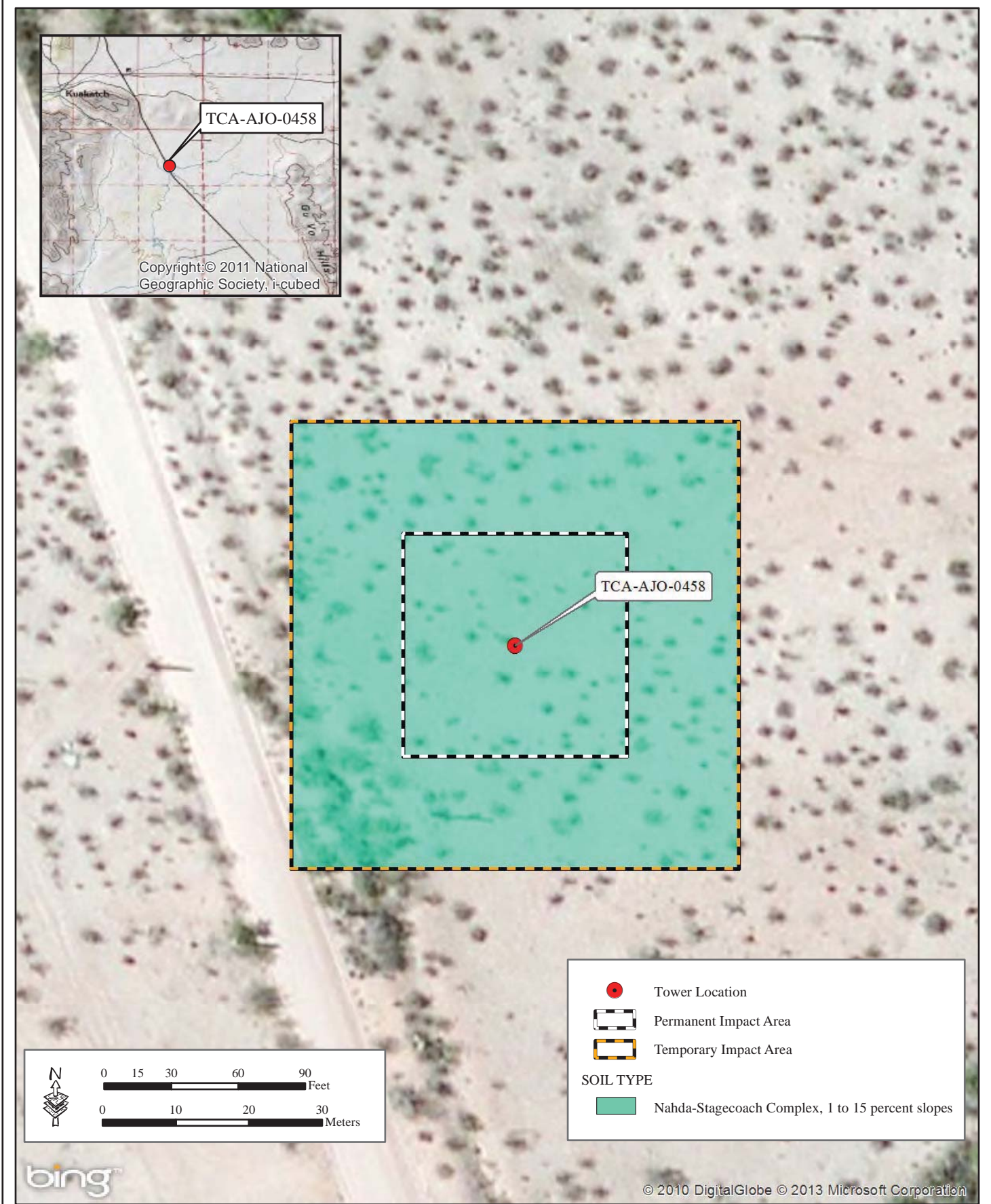
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TCA-AJO-0454 Soil Map




March 2013



-  Tower Location
-  Permanent Impact Area
-  Temporary Impact Area

SOIL TYPE

-  Nahda-Stagecoach Complex, 1 to 15 percent slopes

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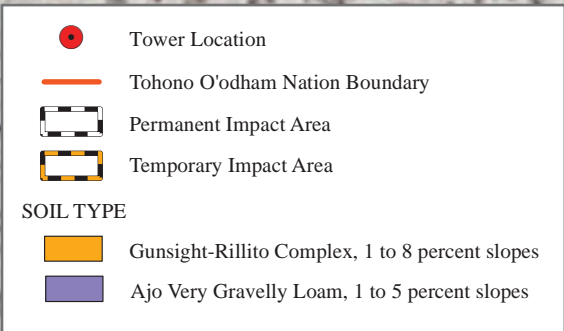
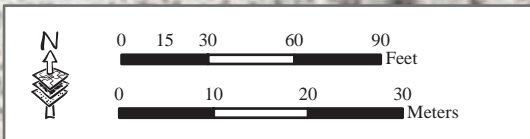
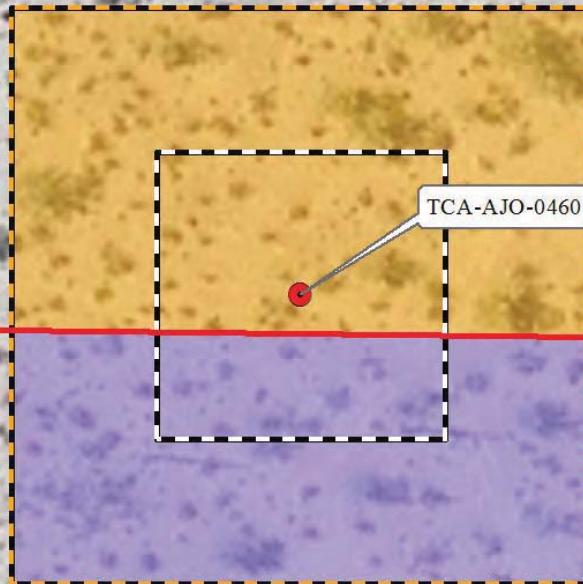
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TCA-AJO-0458 Soil Map



March 2013





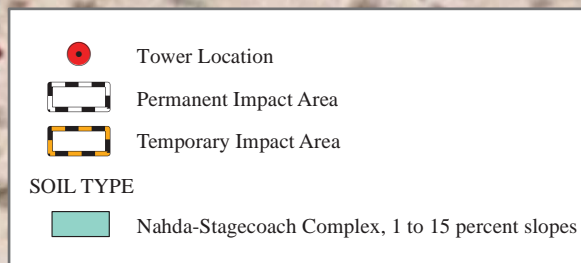
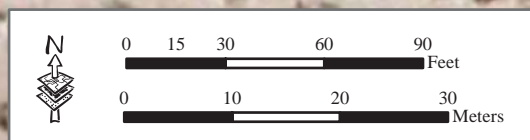
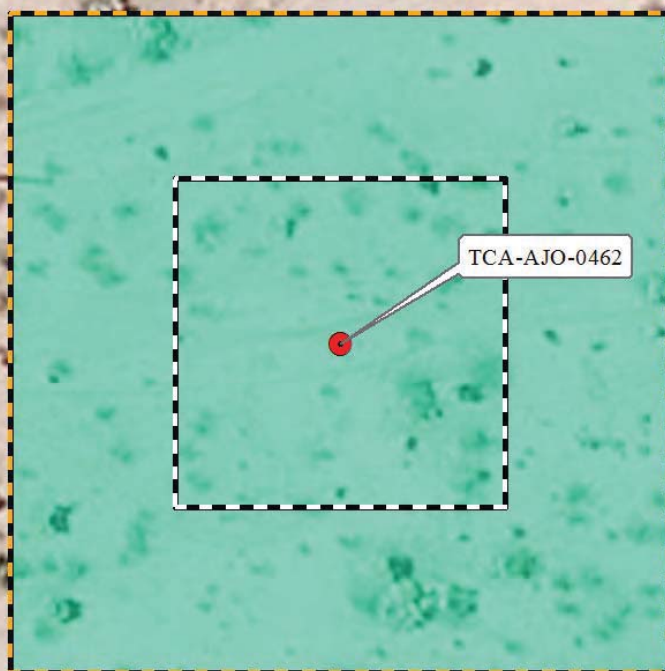
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TCA-AJO-0460 Soil Map

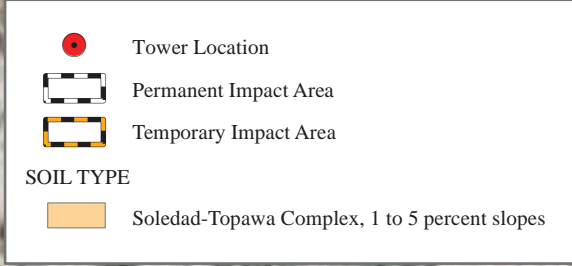
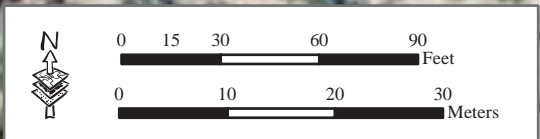
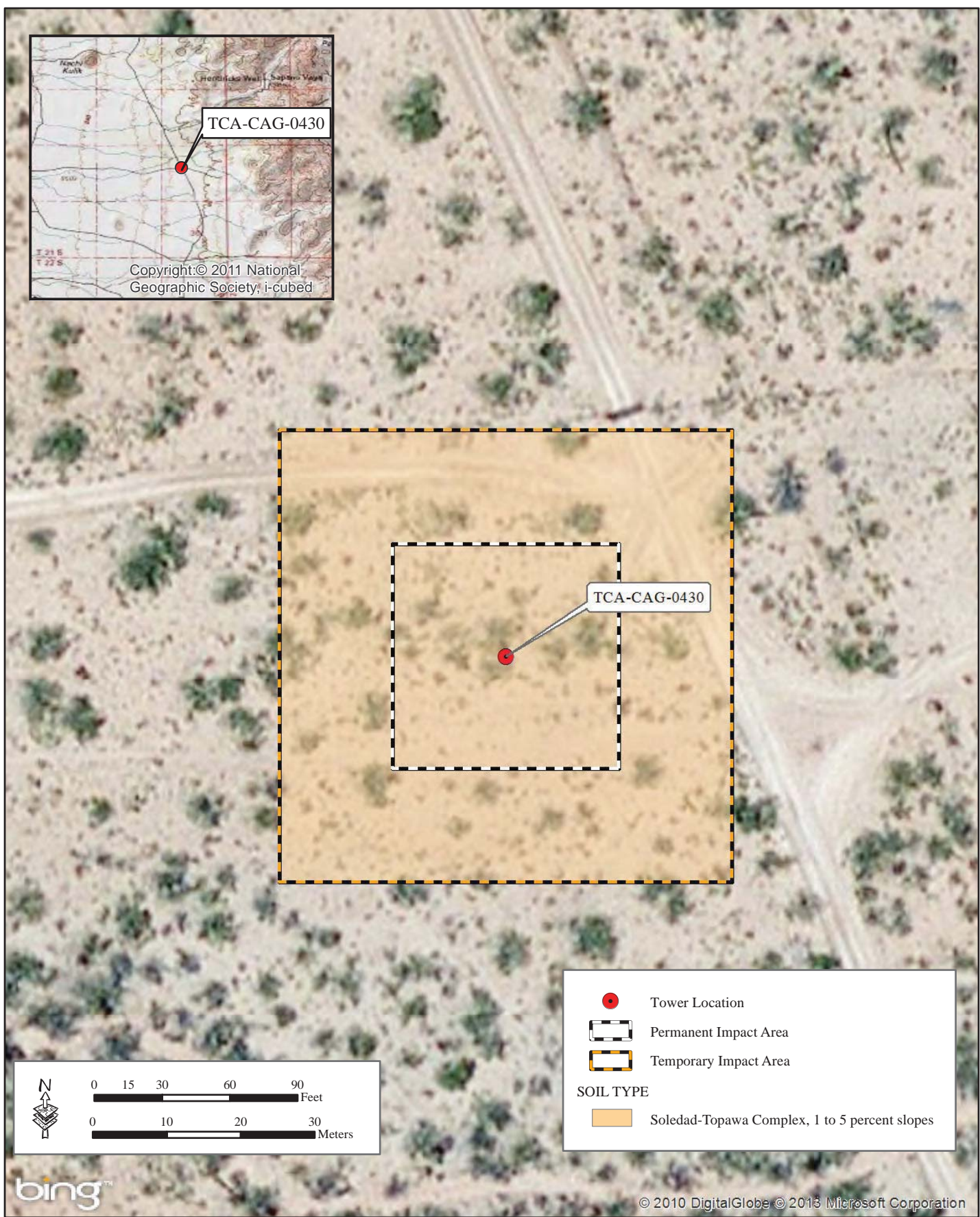
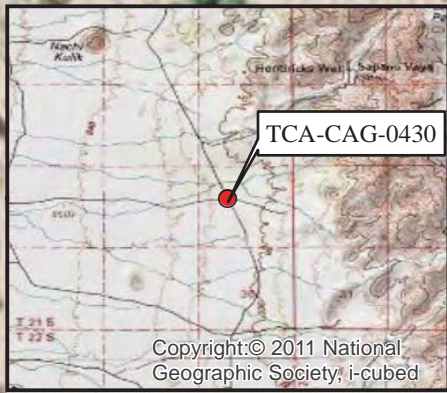


April 2013



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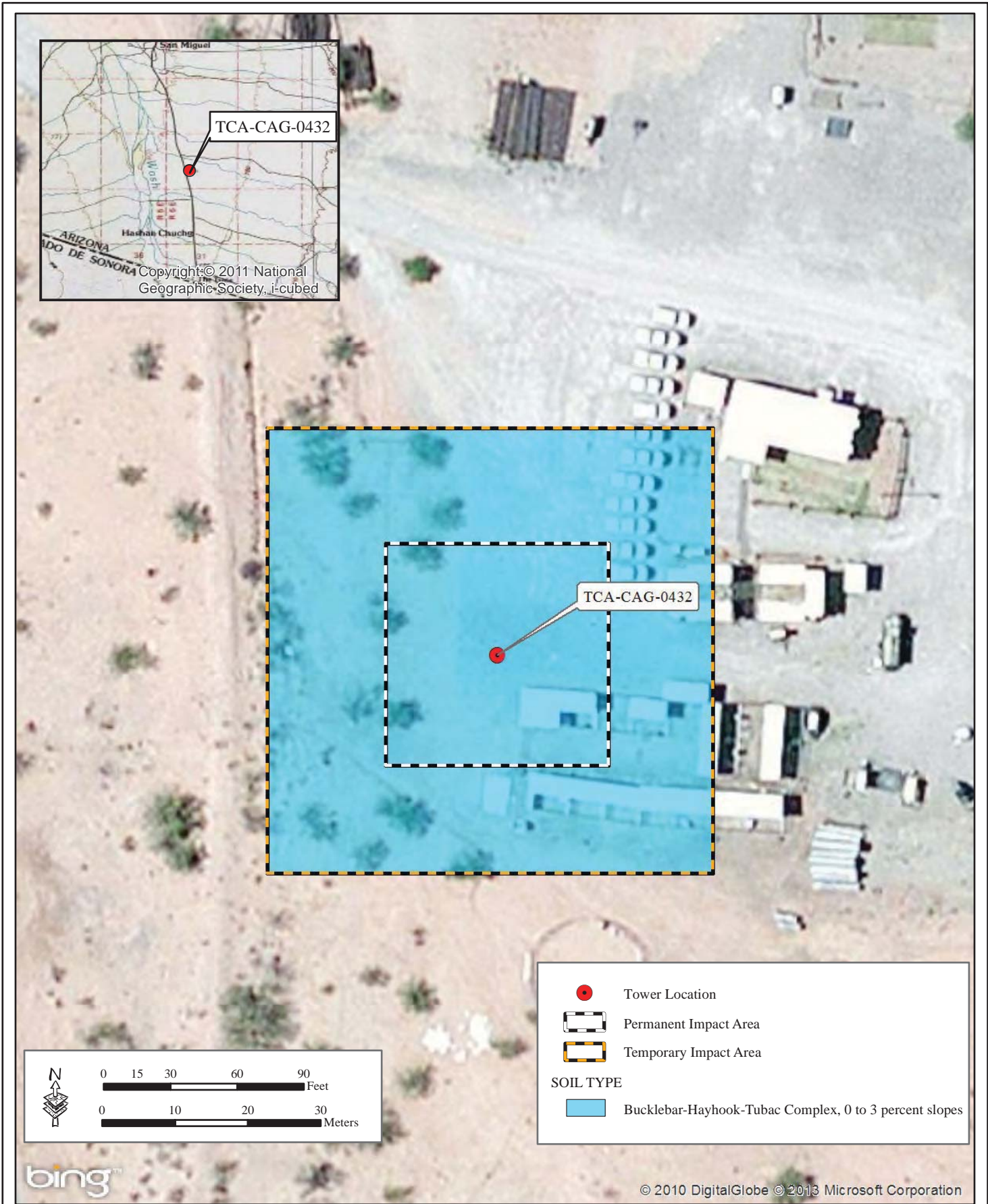
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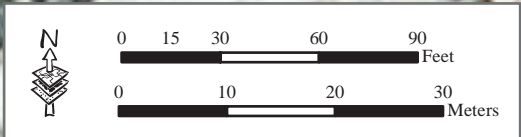
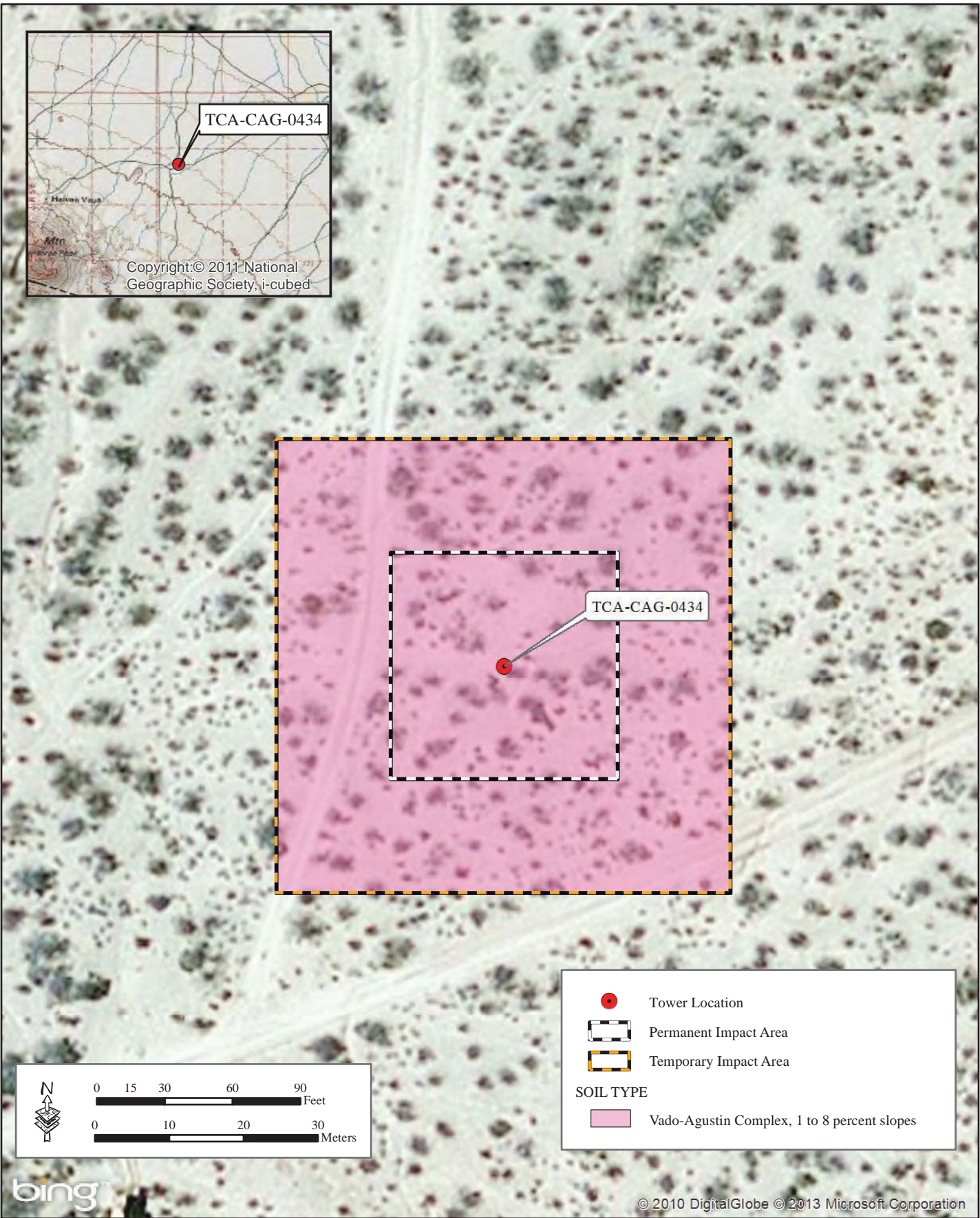
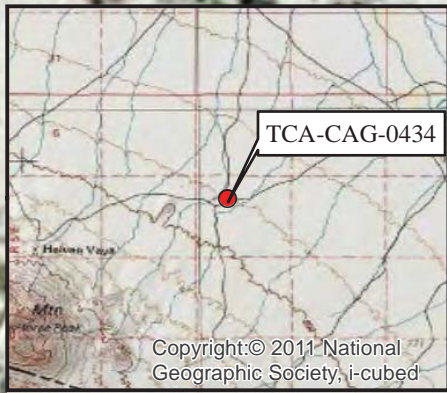
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TCA-CAG-0430 Soil Map




TCA-CAG-0432 Soil Map



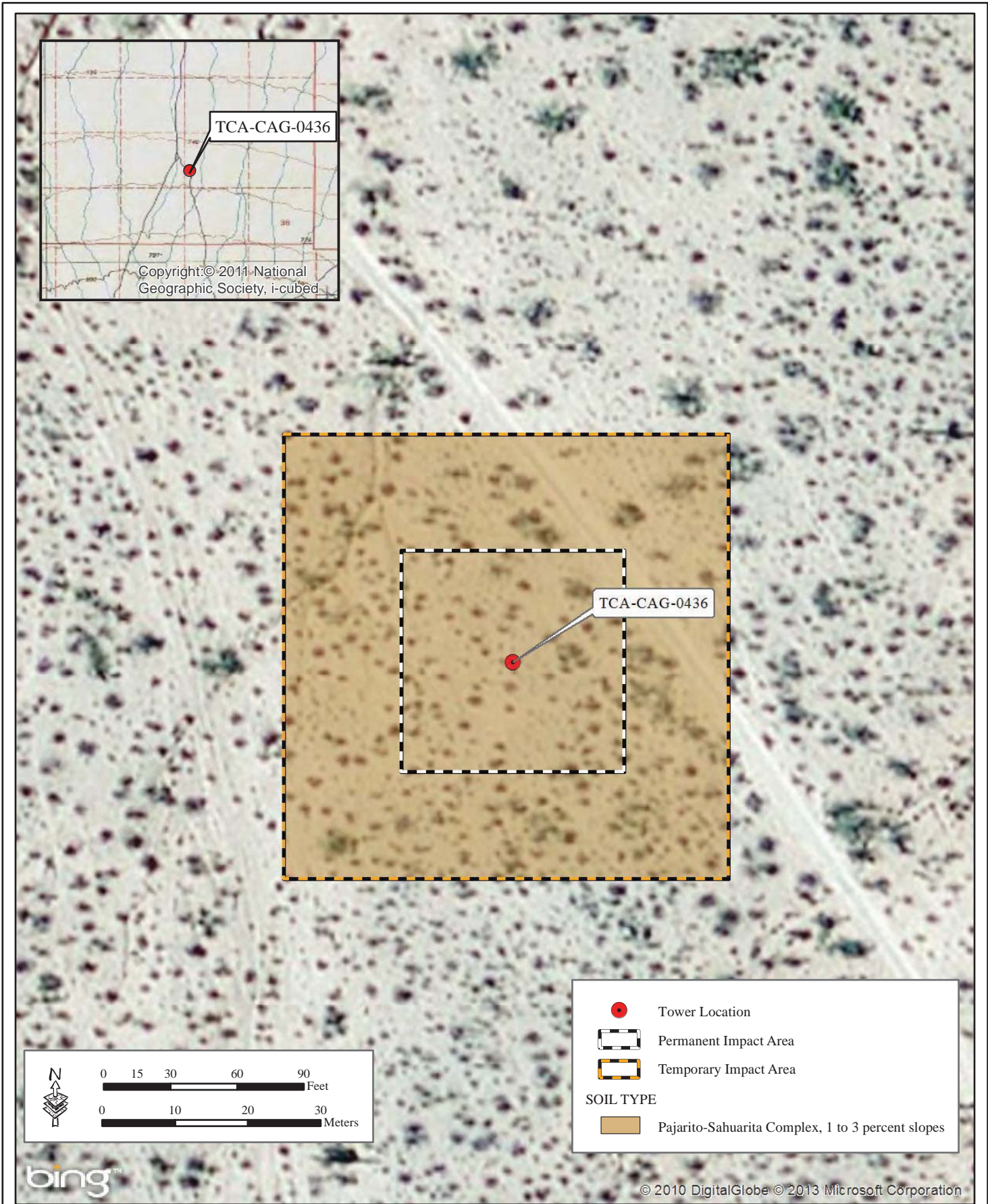
-  Tower Location
-  Permanent Impact Area
-  Temporary Impact Area

SOIL TYPE

-  Vado-Agustin Complex, 1 to 8 percent slopes

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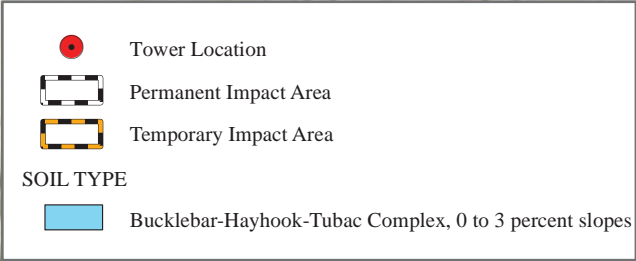
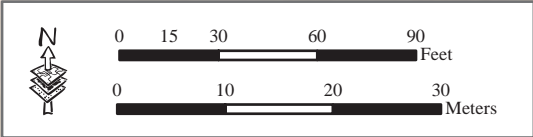
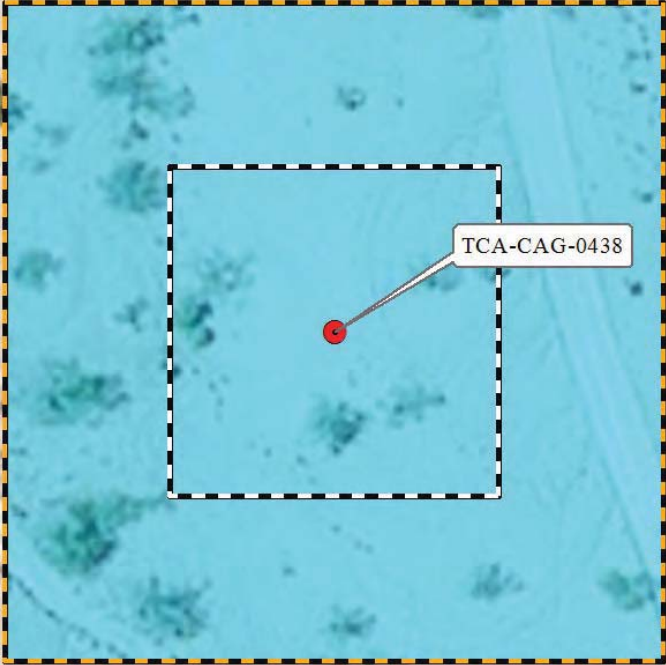
TCA-CAG-0434 Soil Map



TCA-CAG-0436 Soil Map



March 2013



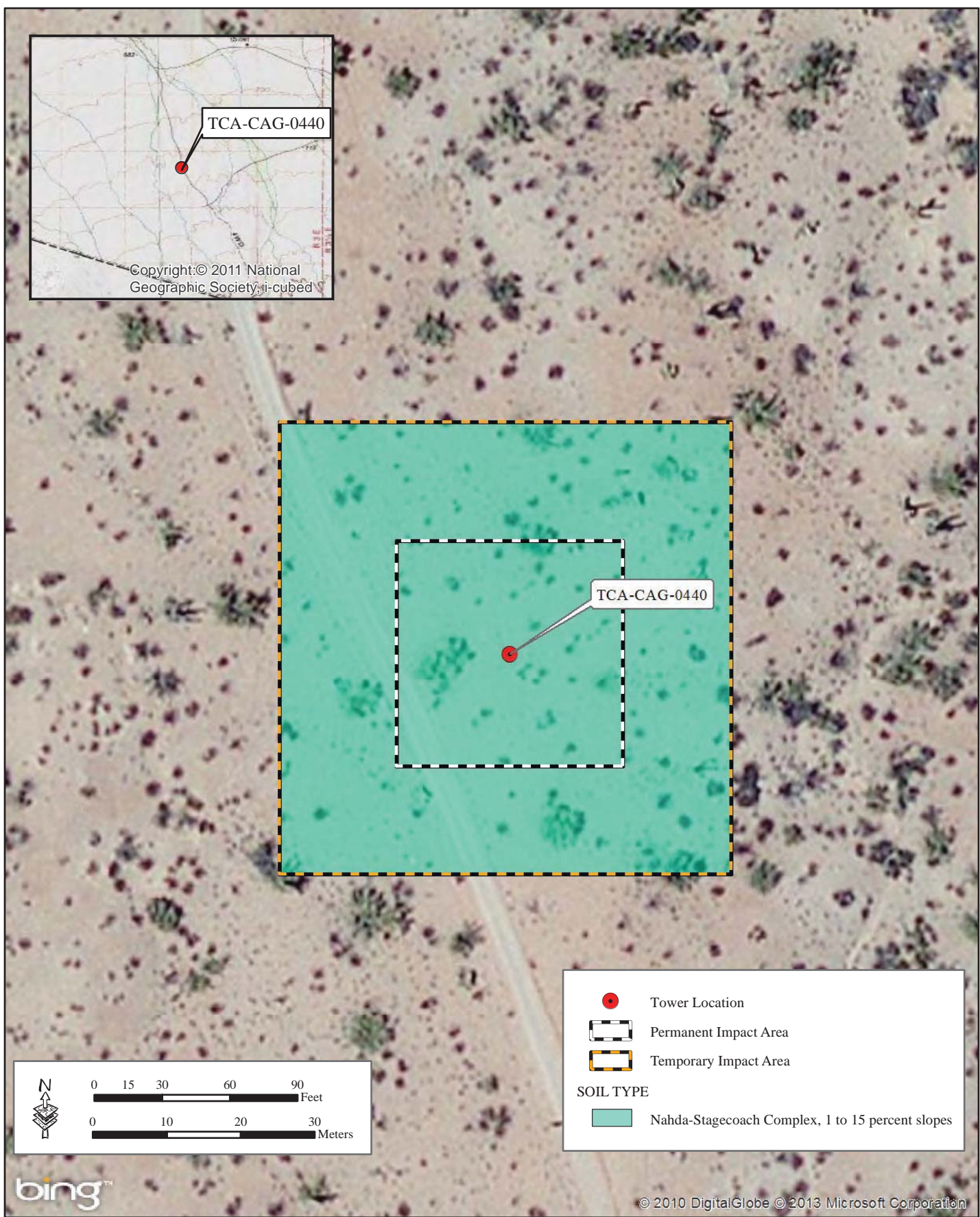
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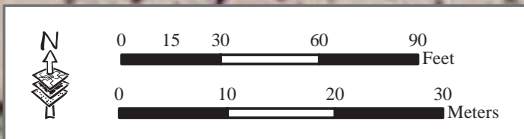
TCA-CAG--0438 Soil Map






March 2013




TCA-CAG-0440



-  Tower Location
-  Permanent Impact Area
-  Temporary Impact Area

SOIL TYPE

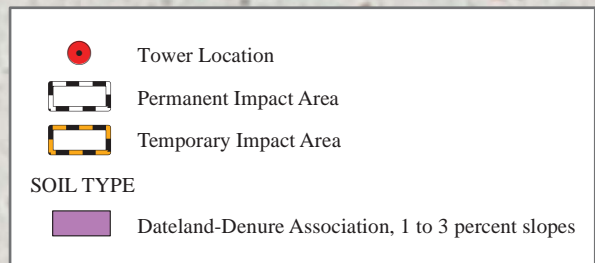
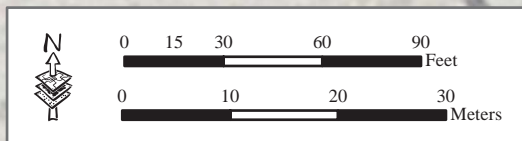
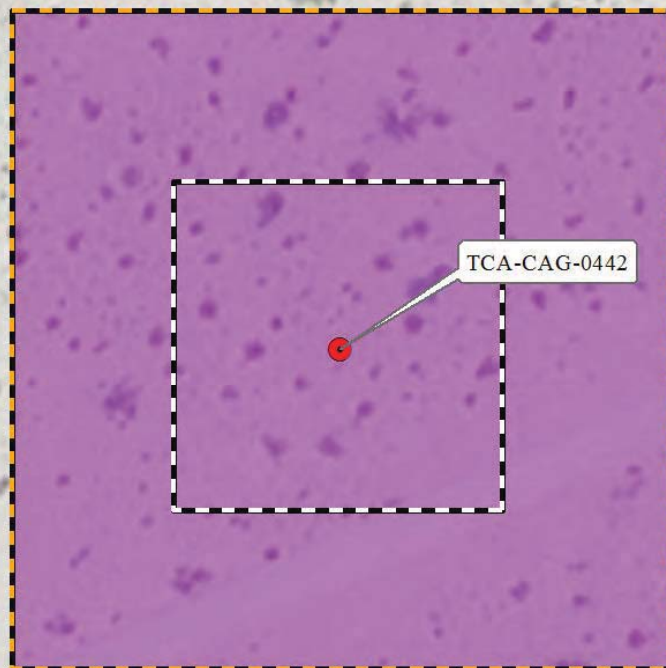
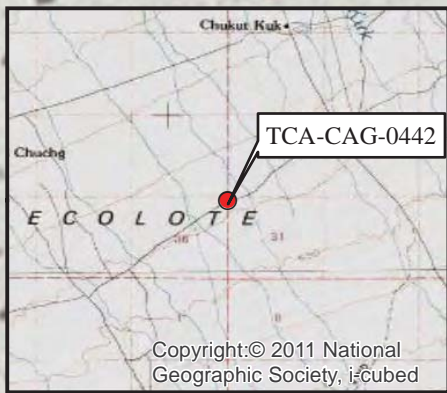
-  Nahda-Stagecoach Complex, 1 to 15 percent slopes

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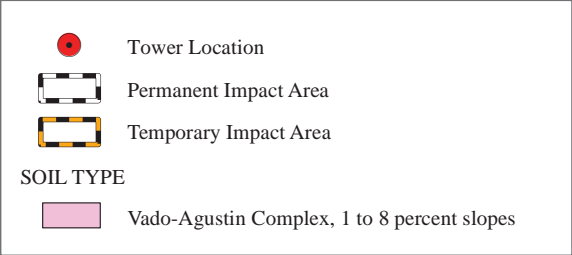
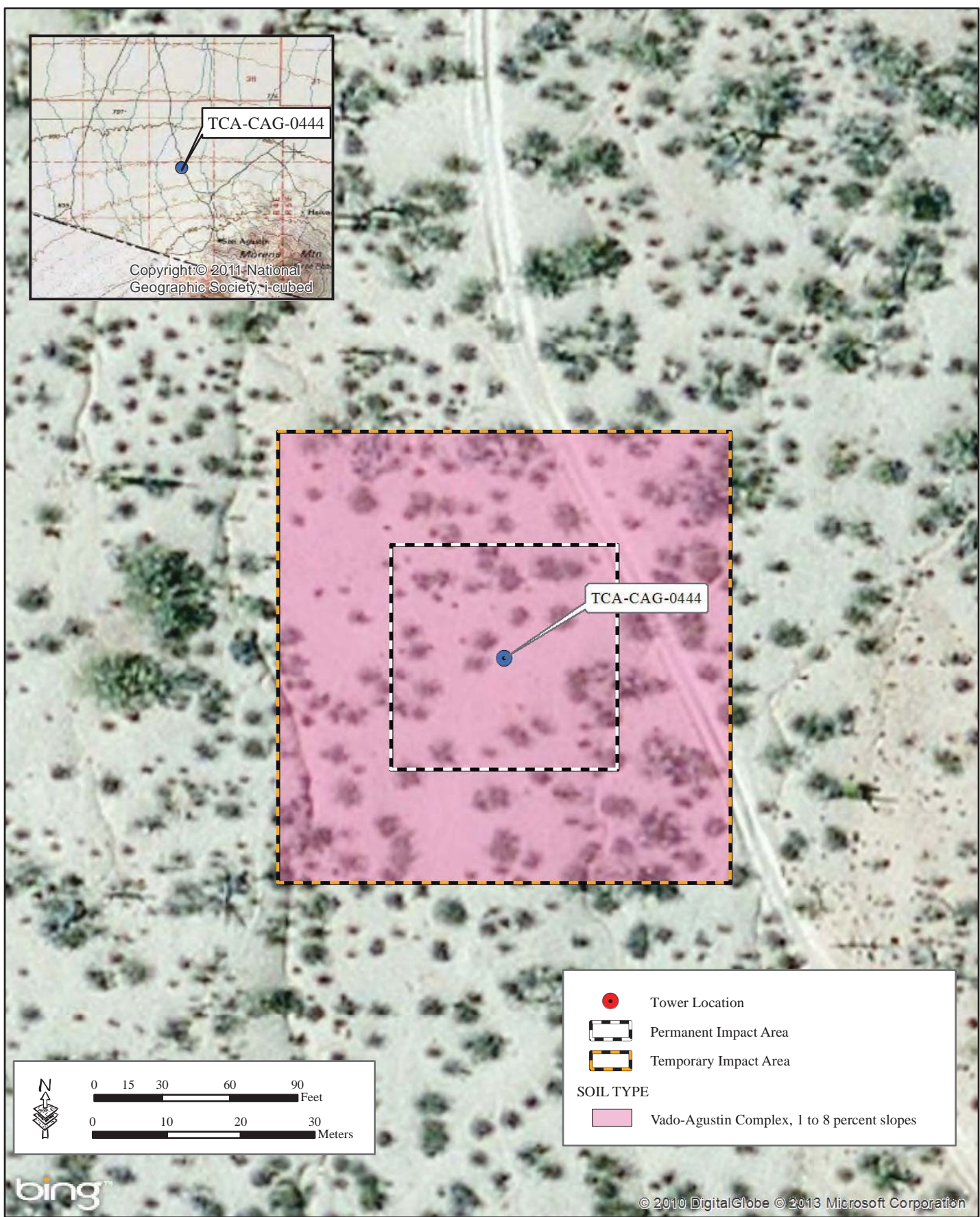
TCA-CAG-0440 Soil Map





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TCA-CAG-0444 Soil Map



March 2013

**APPENDIX E**  
**WATERS OF THE U.S.**



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## Waters of the United States

GIS_ID	Tower ID	Longitude	Latitude	Width (ft)	Length (ft)	Area (ft <sup>2</sup> )	Compliant with Nationwide 14 Permit?	Compliant with Pre-construction Notice?
37*	TCA-AJO-0446	-112.30169	31.7723485	12	30	365	Yes	Yes
33*	TCA-AJO-0446	-112.24789	31.7622612	5	53	264	Yes	Yes
35	TCA-AJO-0446	-112.26010	31.7638038	1	63	63	Yes	Yes
34	TCA-AJO-0446	-112.25957	31.7648007	1	53	53	Yes	Yes
45	TCA-AJO-0448	-112.39934	31.7516747	12	46	550	Yes	Yes
43	TCA-AJO-0448	-112.40851	31.7545756	12	34	408	Yes	Yes
44	TCA-AJO-0448	-112.40096	31.7521315	4	57	229	Yes	Yes
41	TCA-AJO-0448	-112.41702	31.7571539	5	44	221	Yes	Yes
38	TCA-AJO-0448	-112.41931	31.7724344	3	57	172	Yes	Yes
40	TCA-AJO-0448	-112.41825	31.7575104	2	73	146	Yes	Yes
42	TCA-AJO-0448	-112.41412	31.7568279	4	35	141	Yes	Yes
47	TCA-AJO-0448	-112.32137	31.7487279	4	34	138	Yes	Yes
46	TCA-AJO-0448	-112.39126	31.7491768	3	36	107	Yes	Yes
39	TCA-AJO-0448	-112.41896	31.7577075	2	44	89	Yes	Yes
32	TCA-AJO-0450	-112.55438	31.8114805	4	72	288	Yes	Yes
31	TCA-AJO-0450	-112.55030	31.8065093	3	44	133	Yes	Yes
30	TCA-AJO-0450	-112.54907	31.805988	3	39	116	Yes	Yes
26	TCA-AJO-0452	-112.57277	31.9254801	12	55	662	Yes	Yes
29	TCA-AJO-0452	-112.55969	31.9070869	6	60	358	Yes	Yes
27	TCA-AJO-0452	-112.56786	31.9182374	2	103	206	Yes	Yes
28	TCA-AJO-0452	-112.56231	31.9104518	2	87	175	Yes	Yes
23	TCA-AJO-0454	-112.58196	31.9738595	14	70	978	Yes	Yes
21	TCA-AJO-0454	-112.58199	31.9712941	3	71	213	Yes	Yes
25	TCA-AJO-0454	-112.58123	31.9810388	4	35	142	Yes	Yes
24	TCA-AJO-0454	-112.58136	31.9777441	3	40	120	Yes	Yes
22	TCA-AJO-0454	-112.58276	31.972856	3	34	102	Yes	Yes
12	TCA-AJO-0460	-112.66514	32.166754	33	65	2,154	Yes	Yes
2	TCA-AJO-0460	-112.69219	32.160337	20	81	1,623	Yes	Yes
6	TCA-AJO-0460	-112.68190	32.1618377	12	72	863	Yes	Yes
7	TCA-AJO-0460	-112.67781	32.1632108	14	52	735	Yes	Yes
8	TCA-AJO-0460	-112.67306	32.1645439	8	52	413	Yes	Yes

\* Surveyed wash that is no longer part of the project

**Waters of the United States**

GIS_ID	Tower ID	Longitude	Latitude	Width (ft)	Length (ft)	Area (ft <sup>2</sup> )	Compliant with Nationwide 14 Permit?	Compliant with Pre-construction Notice?
14	TCA-AJO-0460	-112.65747	32.1681056	7	54	380	Yes	Yes
10	TCA-AJO-0460	-112.66757	32.1658743	6	51	309	Yes	Yes
5	TCA-AJO-0460	-112.68410	32.1611703	4	75	302	Yes	Yes
15	TCA-AJO-0460	-112.65675	32.1681213	5	58	292	Yes	Yes
13	TCA-AJO-0460	-112.66020	32.1681176	5	51	256	Yes	Yes
4	TCA-AJO-0460	-112.69010	32.1607457	2	124	249	Yes	Yes
9	TCA-AJO-0460	-112.66891	32.1655557	4	60	240	Yes	Yes
3	TCA-AJO-0460	-112.69087	32.1606472	2	55	109	Yes	Yes
11	TCA-AJO-0460	-112.66664	32.1663077	2	52	104	Yes	Yes
1	TCA-AJO-0460	-112.69197	32.1582408	1	97	97	Yes	Yes
16	TCA-AJO-0462	-112.60309	32.0569861	3	192	576	Yes	Yes
19	TCA-AJO-0462	-112.60116	32.0581658	6	76	454	Yes	Yes
18	TCA-AJO-0462	-112.60238	32.0574364	6	70	422	Yes	Yes
20	TCA-AJO-0462	-112.57977	32.0600268	4	55	219	Yes	Yes
17	TCA-AJO-0462	-112.60802	32.0549941	2	55	110	Yes	Yes
244	TCA-CAG-0430	-111.68359	31.5341576	30	109	3,275	Yes	Yes
257	TCA-CAG-0430	-111.68084	31.5545473	27	70	1,901	Yes	Yes
242	TCA-CAG-0430	-111.69158	31.5332905	16	73	1,161	Yes	Yes
263	TCA-CAG-0430	-111.68184	31.5660493	21	50	1,050	Yes	Yes
255	TCA-CAG-0430	-111.68217	31.5532994	18	52	942	Yes	Yes
247	TCA-CAG-0430	-111.68448	31.5391617	12	71	855	Yes	Yes
254	TCA-CAG-0430	-111.68469	31.5483656	12	66	796	Yes	Yes
260	TCA-CAG-0430	-111.68011	31.5610442	14	54	754	Yes	Yes
239	TCA-CAG-0430	-111.74810	31.5477439	8	92	737	Yes	Yes
267	TCA-CAG-0430	-111.68456	31.5723856	8	71	569	Yes	Yes
261	TCA-CAG-0430	-111.68046	31.5621751	8	64	516	Yes	Yes
240	TCA-CAG-0430	-111.73910	31.5449217	10	50	496	Yes	Yes
241	TCA-CAG-0430	-111.69892	31.5321823	7	68	473	Yes	Yes
268	TCA-CAG-0430	-111.68538	31.5730457	2	205	411	Yes	Yes
256	TCA-CAG-0430	-111.68177	31.5537944	7	50	353	Yes	Yes
252	TCA-CAG-0430	-111.68466	31.5459511	6	55	331	Yes	Yes

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GIS_ID	Tower ID	Longitude	Latitude	Width (ft)	Length (ft)	Area (ft <sup>2</sup> )	Compliant with Nationwide 14 Permit?	Compliant with Pre-construction Notice?
258	TCA-CAG-0430	-111.67944	31.5577436	5	64	321	Yes	Yes
262	TCA-CAG-0430	-111.68081	31.563242	6	52	314	Yes	Yes
245	TCA-CAG-0430	-111.68436	31.5351182	6	50	301	Yes	Yes
249	TCA-CAG-0430	-111.68454	31.5425219	5	60	298	Yes	Yes
238	TCA-CAG-0430	-111.75767	31.5507397	7	38	263	Yes	Yes
264	TCA-CAG-0430	-111.68186	31.5670308	4	65	260	Yes	Yes
265	TCA-CAG-0430	-111.68220	31.5677113	4	63	252	Yes	Yes
253	TCA-CAG-0430	-111.68483	31.5471313	4	55	219	Yes	Yes
266	TCA-CAG-0430	-111.68300	31.5693133	4	53	211	Yes	Yes
237	TCA-CAG-0430	-111.76820	31.5541089	5	42	210	Yes	Yes
246	TCA-CAG-0430	-111.68445	31.5384918	4	53	210	Yes	Yes
251	TCA-CAG-0430	-111.68458	31.5441441	4	51	203	Yes	Yes
243	TCA-CAG-0430	-111.68299	31.5332221	4	50	202	Yes	Yes
248	TCA-CAG-0430	-111.68449	31.5411476	3	56	168	Yes	Yes
250	TCA-CAG-0430	-111.68456	31.5429665	3	56	167	Yes	Yes
259	TCA-CAG-0430	-111.67987	31.5605299	2	51	101	Yes	Yes
224A	TCA-CAG-0434	-111.83223	31.5855509	30	59	1,770	Yes	Yes
224B	TCA-CAG-0434	-111.83223	31.5855509	30	54	1,620	Yes	Yes
224C	TCA-CAG-0434	-111.83223	31.5855509	30	52	1,560	Yes	Yes
235	TCA-CAG-0434	-111.78241	31.5586039	162	35	5,670	Yes	No
220	TCA-CAG-0434	-111.83884	31.591025	30	51	1,537	Yes	Yes
217	TCA-CAG-0434	-111.84099	31.5927718	30	51	1,517	Yes	Yes
212	TCA-CAG-0434	-111.83945	31.5980154	15	74	1,115	Yes	Yes
228	TCA-CAG-0434	-111.82811	31.5825746	21	52	1,099	Yes	Yes
230	TCA-CAG-0434	-111.82192	31.5773032	20	52	1,042	Yes	Yes
234	TCA-CAG-0434	-111.80960	31.5671363	12	87	1,039	Yes	Yes
221	TCA-CAG-0434	-111.83791	31.5903857	15	57	858	Yes	Yes
236	TCA-CAG-0434	-111.78136	31.5582289	24	35	850	Yes	Yes
269	TCA-CAG-0434	-111.83452	31.588219	10	82	818	Yes	Yes
231	TCA-CAG-0434	-111.82164	31.5754459	15	53	791	Yes	Yes
223	TCA-CAG-0434	-111.83399	31.5875609	12	54	650	Yes	Yes

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<b>GIS_ID</b>	<b>Tower ID</b>	<b>Longitude</b>	<b>Latitude</b>	<b>Width (ft)</b>	<b>Length (ft)</b>	<b>Area (ft<sup>2</sup>)</b>	<b>Compliant with Nationwide 14 Permit?</b>	<b>Compliant with Pre-construction Notice?</b>
219	TCA-CAG-0434	-111.83939	31.5914207	12	51	611	Yes	Yes
203	TCA-CAG-0434	-111.84109	31.615641	8	61	489	Yes	Yes
208	TCA-CAG-0434	-111.83966	31.605091	8	54	430	Yes	Yes
209	TCA-CAG-0434	-111.83945	31.5997417	7	51	354	Yes	Yes
211	TCA-CAG-0434	-111.83935	31.5988078	4	83	334	Yes	Yes
226	TCA-CAG-0434	-111.83163	31.5851246	6	55	327	Yes	Yes
270	TCA-CAG-0434	-111.83405	31.5877081	6	54	325	Yes	Yes
210	TCA-CAG-0434	-111.83929	31.5991919	5	59	294	Yes	Yes
206	TCA-CAG-0434	-111.84029	31.6085198	5	52	259	Yes	Yes
218	TCA-CAG-0434	-111.84003	31.5920401	5	52	258	Yes	Yes
233	TCA-CAG-0434	-111.81988	31.5704266	5	51	257	Yes	Yes
216	TCA-CAG-0434	-111.84129	31.5933183	4	64	255	Yes	Yes
215	TCA-CAG-0434	-111.84137	31.5939758	4	60	240	Yes	Yes
232	TCA-CAG-0434	-111.82156	31.5749005	4	60	239	Yes	Yes
204	TCA-CAG-0434	-111.84039	31.610086	3	76	227	Yes	Yes
205	TCA-CAG-0434	-111.84039	31.6098137	4	53	214	Yes	Yes
227	TCA-CAG-0434	-111.83041	31.5841043	4	51	203	Yes	Yes
207	TCA-CAG-0434	-111.83971	31.6074145	3	63	188	Yes	Yes
214	TCA-CAG-0434	-111.84142	31.5944271	3	54	161	Yes	Yes
213	TCA-CAG-0434	-111.84173	31.5948651	2	55	111	Yes	Yes
229	TCA-CAG-0434	-111.82763	31.5822002	2	54	108	Yes	Yes
225	TCA-CAG-0434	-111.83177	31.5852638	2	53	107	Yes	Yes
157	TCA-CAG-0436	-111.91056	31.6507591	25	77	1,920	Yes	Yes
166	TCA-CAG-0436	-111.90693	31.6301805	17	60	1,026	Yes	Yes
168	TCA-CAG-0436	-111.90604	31.6284311	10	82	823	Yes	Yes
164	TCA-CAG-0436	-111.90814	31.6413571	12	57	685	Yes	Yes
163	TCA-CAG-0436	-111.90826	31.6415976	5	100	500	Yes	Yes
167	TCA-CAG-0436	-111.90633	31.6288979	5	99	493	Yes	Yes
162	TCA-CAG-0436	-111.90836	31.6417669	2	233	466	Yes	Yes
169	TCA-CAG-0436	-111.90548	31.6254451	8	53	420	Yes	Yes
161	TCA-CAG-0436	-111.90905	31.6436582	3	133	399	Yes	Yes



**Waters of the United States**

GIS_ID	Tower ID	Longitude	Latitude	Width (ft)	Length (ft)	Area (ft <sup>2</sup> )	Compliant with Nationwide 14 Permit?	Compliant with Pre-construction Notice?
160	TCA-CAG-0436	-111.90897	31.6447963	3	124	371	Yes	Yes
272	TCA-CAG-0436	-111.91048	31.6503204	6	57	343	Yes	Yes
155	TCA-CAG-0436	-111.91148	31.6570568	2	170	340	Yes	Yes
154	TCA-CAG-0436	-111.91160	31.654967	6	55	327	Yes	Yes
156	TCA-CAG-0436	-111.91124	31.6516121	4	66	263	Yes	Yes
158	TCA-CAG-0436	-111.91040	31.6497277	3	79	236	Yes	Yes
165	TCA-CAG-0436	-111.90770	31.6333987	3	71	213	Yes	Yes
159	TCA-CAG-0436	-111.90958	31.6475234	3	63	188	Yes	Yes
153	TCA-CAG-0436	-111.91112	31.65628	1	113	113	Yes	Yes
147	TCA-CAG-0438	-111.89889	31.6002112	24	72	1,732	Yes	Yes
119	TCA-CAG-0438	-111.95774	31.6141245	36	36	1,279	Yes	Yes
146	TCA-CAG-0438	-111.89947	31.599777	20	52	1,043	Yes	Yes
144	TCA-CAG-0438	-111.90213	31.5993126	14	56	784	Yes	Yes
145	TCA-CAG-0438	-111.89961	31.59966	13	51	658	Yes	Yes
99	TCA-CAG-0438	-111.99062	31.6507714	10	66	656	Yes	Yes
108	TCA-CAG-0438	-111.97938	31.620692	15	40	601	Yes	Yes
107	TCA-CAG-0438	-111.98253	31.6229732	10	60	600	Yes	Yes
135	TCA-CAG-0438	-111.92459	31.6034282	15	38	569	Yes	Yes
143	TCA-CAG-0438	-111.91592	31.6006949	10	52	520	Yes	Yes
100	TCA-CAG-0438	-111.98612	31.6400294	3	155	465	Yes	Yes
141	TCA-CAG-0438	-111.91844	31.6015006	8	53	424	Yes	Yes
101	TCA-CAG-0438	-111.98482	31.6378942	3	137	410	Yes	Yes
104	TCA-CAG-0438	-111.98342	31.6273778	2	201	402	Yes	Yes
106	TCA-CAG-0438	-111.98255	31.6248715	2	198	396	Yes	Yes
148	TCA-CAG-0438	-111.89697	31.6034615	3	121	362	Yes	Yes
117	TCA-CAG-0438	-111.95999	31.614596	8	39	310	Yes	Yes
102	TCA-CAG-0438	-111.98400	31.6291511	4	76	303	Yes	Yes
182	TCA-CAG-0438	-111.97536	31.6194217	5	56	282	Yes	Yes
105	TCA-CAG-0438	-111.98269	31.6253919	2	127	254	Yes	Yes
271	TCA-CAG-0438	-111.98002	31.6208546	6	42	251	Yes	Yes
109	TCA-CAG-0438	-111.97914	31.6206008	5	50	251	Yes	Yes

**Waters of the United States**

GIS_ID	Tower ID	Longitude	Latitude	Width (ft)	Length (ft)	Area (ft <sup>2</sup> )	Compliant with Nationwide 14 Permit?	Compliant with Pre-construction Notice?
130	TCA-CAG-0438	-111.98245	31.6216568	6	38	228	Yes	Yes
136	TCA-CAG-0438	-111.92791	31.6044794	3	76	227	Yes	Yes
113	TCA-CAG-0438	-111.97154	31.6182269	6	38	225	Yes	Yes
122	TCA-CAG-0438	-111.94681	31.6104279	6	37	222	Yes	Yes
121	TCA-CAG-0438	-111.94944	31.6112447	5	44	221	Yes	Yes
138	TCA-CAG-0438	-111.92233	31.6027157	3	74	221	Yes	Yes
132	TCA-CAG-0438	-111.92941	31.6049534	6	37	221	Yes	Yes
131	TCA-CAG-0438	-111.93175	31.6056968	3	72	215	Yes	Yes
115	TCA-CAG-0438	-111.96817	31.6171678	5	43	215	Yes	Yes
124	TCA-CAG-0438	-111.94479	31.6097896	3	70	210	Yes	Yes
134	TCA-CAG-0438	-111.92753	31.604349	3	65	194	Yes	Yes
125	TCA-CAG-0438	-111.94354	31.6093942	4	48	193	Yes	Yes
129	TCA-CAG-0438	-111.93686	31.6072851	4	46	186	Yes	Yes
111	TCA-CAG-0438	-111.97825	31.6205153	5	36	178	Yes	Yes
120	TCA-CAG-0438	-111.95347	31.612528	5	35	176	Yes	Yes
128	TCA-CAG-0438	-111.93430	31.6064942	4	41	165	Yes	Yes
112	TCA-CAG-0438	-111.97458	31.6191404	3	55	165	Yes	Yes
110	TCA-CAG-0438	-111.97892	31.6205422	4	36	146	Yes	Yes
133	TCA-CAG-0438	-111.92854	31.6047188	4	36	145	Yes	Yes
116	TCA-CAG-0438	-111.96376	31.6157154	4	35	141	Yes	Yes
114	TCA-CAG-0438	-111.97125	31.6181446	3	45	136	Yes	Yes
103	TCA-CAG-0438	-111.98351	31.6278357	1	133	133	Yes	Yes
140	TCA-CAG-0438	-111.92030	31.6020772	2	66	132	Yes	Yes
127	TCA-CAG-0438	-111.93742	31.6074756	3	38	113	Yes	Yes
126	TCA-CAG-0438	-111.94284	31.6093368	3	37	110	Yes	Yes
118	TCA-CAG-0438	-111.95963	31.6144632	3	35	105	Yes	Yes
98	TCA-CAG-0438	-111.99052	31.6512125	2	51	102	Yes	Yes
139	TCA-CAG-0438	-111.92179	31.6025562	2	46	92	Yes	Yes
142	TCA-CAG-0438	-111.91680	31.6009886	2	36	71	Yes	Yes
123	TCA-CAG-0438	-111.94563	31.610078	1	54	54	Yes	Yes
137	TCA-CAG-0438	-111.92332	31.6030432	1	36	36	Yes	Yes

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GIS_ID	Tower ID	Longitude	Latitude	Width (ft)	Length (ft)	Area (ft <sup>2</sup> )	Compliant with Nationwide 14 Permit?	Compliant with Pre-construction Notice?
83	TCA-CAG-0440	-112.00900	31.6300238	36	71	2,565	Yes	Yes
72	TCA-CAG-0440	-112.02788	31.6361683	56	40	2,252	Yes	Yes
84	TCA-CAG-0440	-112.00054	31.6273547	15	50	745	Yes	Yes
78	TCA-CAG-0440	-112.01788	31.6327959	20	35	700	Yes	Yes
97	TCA-CAG-0440	-111.98521	31.6235231	18	38	693	Yes	Yes
89	TCA-CAG-0440	-111.99712	31.626255	10	54	544	Yes	Yes
71	TCA-CAG-0440	-112.02923	31.6363701	12	37	441	Yes	Yes
69	TCA-CAG-0440	-112.03261	31.6374057	10	43	425	Yes	Yes
80	TCA-CAG-0440	-112.01502	31.6319434	12	35	423	Yes	Yes
81	TCA-CAG-0440	-112.01450	31.6317814	8	45	359	Yes	Yes
273	TCA-CAG-0440	-111.99500	31.625565	7	45	317	Yes	Yes
36	TCA-CAG-0440	-111.99465	31.6254606	6	50	298	Yes	Yes
94	TCA-CAG-0440	-111.99122	31.6243928	8	36	288	Yes	Yes
82	TCA-CAG-0440	-112.01138	31.6307809	8	35	283	Yes	Yes
76	TCA-CAG-0440	-112.01953	31.6333299	6	44	266	Yes	Yes
96	TCA-CAG-0440	-111.98674	31.6235926	6	33	200	Yes	Yes
67	TCA-CAG-0440	-112.03846	31.6587938	3	60	181	Yes	Yes
86	TCA-CAG-0440	-112.00015	31.6272143	4	43	174	Yes	Yes
66	TCA-CAG-0440	-112.03976	31.659644	3	55	166	Yes	Yes
68	TCA-CAG-0440	-112.03192	31.6420418	3	52	157	Yes	Yes
77	TCA-CAG-0440	-112.01879	31.6331076	3	48	145	Yes	Yes
87	TCA-CAG-0440	-111.99941	31.6269727	3	45	136	Yes	Yes
93	TCA-CAG-0440	-111.99311	31.625006	2	67	134	Yes	Yes
92	TCA-CAG-0440	-111.99331	31.6250728	2	66	133	Yes	Yes
90	TCA-CAG-0440	-111.99674	31.6261513	3	40	121	Yes	Yes
95	TCA-CAG-0440	-111.98908	31.6240125	3	40	120	Yes	Yes
91	TCA-CAG-0440	-111.99640	31.6260677	3	39	116	Yes	Yes
75	TCA-CAG-0440	-112.02238	31.634205	3	38	115	Yes	Yes
85	TCA-CAG-0440	-112.00024	31.6272347	3	38	113	Yes	Yes
74	TCA-CAG-0440	-112.02376	31.6346079	2	56	113	Yes	Yes
88	TCA-CAG-0440	-111.99970	31.6271468	2	39	78	Yes	Yes

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GIS_ID	Tower ID	Longitude	Latitude	Width (ft)	Length (ft)	Area (ft <sup>2</sup> )	Compliant with Nationwide 14 Permit?	Compliant with Pre-construction Notice?
79	TCA-CAG-0440	-112.01592	31.6321832	2	37	73	Yes	Yes
70	TCA-CAG-0440	-112.03100	31.6370584	2	36	71	Yes	Yes
73	TCA-CAG-0440	-112.02502	31.6350376	2	36	71	Yes	Yes
52	TCA-CAG-0442 n	-112.10693	31.7399589	16	58	933	Yes	Yes
49	TCA-CAG-0442 n	-112.11146	31.7359874	16	52	829	Yes	Yes
61	TCA-CAG-0442 n	-112.09987	31.7455878	10	50	500	Yes	Yes
54	TCA-CAG-0442 n	-112.10863	31.7383192	6	78	468	Yes	Yes
58	TCA-CAG-0442 n	-112.10221	31.7434764	8	50	400	Yes	Yes
50	TCA-CAG-0442 n	-112.11041	31.7367165	6	58	348	Yes	Yes
60	TCA-CAG-0442 n	-112.10062	31.7450518	5	52	258	Yes	Yes
59	TCA-CAG-0442 n	-112.10264	31.7431206	5	49	247	Yes	Yes
64	TCA-CAG-0442 n	-112.05519	31.6928284	4	58	231	Yes	Yes
57	TCA-CAG-0442 n	-112.10277	31.7430348	4	52	209	Yes	Yes
48	TCA-CAG-0442 n	-112.11302	31.7354625	4	51	206	Yes	Yes
56	TCA-CAG-0442 n	-112.10295	31.742921	4	48	192	Yes	Yes
55	TCA-CAG-0442 n	-112.10542	31.7409181	3	62	187	Yes	Yes
65	TCA-CAG-0442 n	-112.05416	31.6886534	3	51	153	Yes	Yes
63	TCA-CAG-0442 n	-112.07397	31.716122	2	67	134	Yes	Yes
51	TCA-CAG-0442 n	-112.10820	31.7388307	2	60	119	Yes	Yes
53	TCA-CAG-0442 n	-112.10639	31.740253	2	54	108	Yes	Yes
62	TCA-CAG-0442 n	-112.09800	31.7462105	2	52	105	Yes	Yes
149	TCA-CAG-0444	-111.89930	31.6125119	30	77	2,297	Yes	Yes
170	TCA-CAG-0444	-111.89710	31.6126413	21	76	1,586	Yes	Yes
173	TCA-CAG-0444	-111.88835	31.6209661	25	60	1,500	Yes	Yes
194	TCA-CAG-0444	-111.85331	31.6195301	15	79	1,183	Yes	Yes
171	TCA-CAG-0444	-111.89405	31.6164412	18	60	1,072	Yes	Yes
178	TCA-CAG-0444	-111.87973	31.6230062	14	62	867	Yes	Yes
174	TCA-CAG-0444	-111.88198	31.6248672	15	53	801	Yes	Yes
190	TCA-CAG-0444	-111.85938	31.61786	6	109	657	Yes	Yes
180	TCA-CAG-0444	-111.87759	31.6210385	12	53	636	Yes	Yes
150	TCA-CAG-0444	-111.89871	31.6123495	12	53	636	Yes	Yes

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GIS_ID	Tower ID	Longitude	Latitude	Width (ft)	Length (ft)	Area (ft <sup>2</sup> )	Compliant with Nationwide 14 Permit?	Compliant with Pre-construction Notice?
191	TCA-CAG-0444	-111.85850	31.6180164	8	78	624	Yes	Yes
185	TCA-CAG-0444	-111.87276	31.6148631	8	75	597	Yes	Yes
201	TCA-CAG-0444	-111.84263	31.6181891	9	58	523	Yes	Yes
198	TCA-CAG-0444	-111.85015	31.6194414	10	50	505	Yes	Yes
188	TCA-CAG-0444	-111.86503	31.6150839	7	54	376	Yes	Yes
151	TCA-CAG-0444	-111.90451	31.6207139	2	185	369	Yes	Yes
181	TCA-CAG-0444	-111.90394	31.619931	6	59	355	Yes	Yes
172	TCA-CAG-0444	-111.89226	31.6176842	4	80	322	Yes	Yes
175	TCA-CAG-0444	-111.88168	31.6246875	6	51	308	Yes	Yes
202	TCA-CAG-0444	-111.84195	31.6178992	5	52	260	Yes	Yes
193	TCA-CAG-0444	-111.85645	31.6187455	4	62	248	Yes	Yes
192	TCA-CAG-0444	-111.85821	31.6180266	4	61	242	Yes	Yes
195	TCA-CAG-0444	-111.85284	31.6194865	4	54	215	Yes	Yes
186	TCA-CAG-0444	-111.86650	31.6152035	3	66	197	Yes	Yes
152	TCA-CAG-0444	-111.90505	31.6206451	2	96	192	Yes	Yes
187	TCA-CAG-0444	-111.86584	31.6150898	3	62	185	Yes	Yes
176	TCA-CAG-0444	-111.88120	31.6243181	3	55	166	Yes	Yes
179	TCA-CAG-0444	-111.87827	31.6218418	3	55	165	Yes	Yes
177	TCA-CAG-0444	-111.88026	31.6234224	3	50	151	Yes	Yes
199	TCA-CAG-0444	-111.84804	31.6190041	2	74	148	Yes	Yes
184	TCA-CAG-0444	-111.84845	31.6190958	1	136	136	Yes	Yes
189	TCA-CAG-0444	-111.86250	31.6162093	2	63	125	Yes	Yes
183	TCA-CAG-0444	-111.87402	31.6149617	2	62	125	Yes	Yes
200	TCA-CAG-0444	-111.84554	31.6187771	2	60	120	Yes	Yes
197	TCA-CAG-0444	-111.85040	31.6194518	2	57	114	Yes	Yes
196	TCA-CAG-0444	-111.85102	31.6195408	1	78	78	Yes	Yes
222*	TCA-CAG-0446	-112.30172	31.7711758	2	31	63	Yes	Yes

\* Surveyed wash that is no longer part of the project

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**APPENDIX F**  
**ARIZONA NATURAL HERITAGE PROGRAM (ANHP)**  
**SPECIAL STATUS SPECIES LIST**

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**Special Status Species by County, Taxon, Scientific Name**

**Arizona Game and Fish Department, Heritage Data management System Updated: May 5, 2016**

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ELCODE	ESA	BLM	USFS	NESL	MEXFED	SGCN	NPL	S RANK	G RANK
Pima	AMPHIBIAN	Anaxyrus retiformis	Sonoran Green Toad	AAABB01140		S			PR	1B		S3	G4
Pima	AMPHIBIAN	Smilisca fodiens	Lowland Burrowing Treefrog	AAABC06010		S				1B		S2	G4
Pima	AMPHIBIAN	Craugastor augusti cactorum	Western Barking Frog	AAABD04171			S			1B		S2	G5T5
Pima	AMPHIBIAN	Gastrophryne olivacea	Western Narrow-mouthed Toad	AAABE01020		S			PR	1C		S3	G5
Pima	AMPHIBIAN	Lithobates chiricahuensis	Chiricahua Leopard Frog	AAABH01080	LT				A	1A		S2	G2G3
Pima	AMPHIBIAN	Lithobates tarahumarae	Tarahumara Frog	AAABH01210	SC		S			1A		SXS1	G3
Pima	AMPHIBIAN	Lithobates yavapaiensis	Lowland Leopard Frog	AAABH01250	SC	S	S		PR	1A		S3	G4
Pima	BIRD	Dendrocygna bicolor	Fulvous Whistling-Duck	ABNJB01010	SC							SAN	G5
Pima	BIRD	Accipiter gentilis	Northern Goshawk	ABNKC12060	SC	S	S	4	A	1B		S3	G5
Pima	BIRD	Buteo plagiatus	Gray Hawk	ABNKC19150	SC							S3	GNR
Pima	BIRD	Aquila chrysaetos	Golden Eagle	ABNKC22010		S		3	A	1B		S4	G5
Pima	BIRD	Falco peregrinus anatum	American Peregrine Falcon	ABNKD06071	SC	S	S	4	PR	1A		S4	G4T4
Pima	BIRD	Colinus virginianus ridgwayi	Masked Bobwhite	ABNLC21022	LE				P	1A		S1	G5T1
Pima	BIRD	Rallus obsoletus yumanensis	Yuma Ridgeway's Rail	ABNME0501A	LE				A	1A		S3	G5T3
Pima	BIRD	Coccyzus americanus	Yellow-billed Cuckoo (Western DPS)	ABNRB02020	LT		S	2		1A		S3	G5
Pima	BIRD	Glaucidium brasilianum cactorum	Cactus Ferruginous Pygmy-owl	ABNSB08041	SC	S	S			1B		S1	G5T3
Pima	BIRD	Athene cunicularia hypugaea	Western Burrowing Owl	ABNSB10012	SC	S	S	4	PR	1B		S3	G4T4
Pima	BIRD	Strix occidentalis lucida	Mexican Spotted Owl	ABNSB12012	LT			3	A	1A		S3S4	G3T3
Pima	BIRD	Antrostomus ridgwayi	Buff-collared Nightjar	ABNTA07060			S			1B		S2S3	G5
Pima	BIRD	Amazilia violiceps	Violet-crowned Hummingbird	ABNUC29150			S			1B		S3	G5
Pima	BIRD	Trogon elegans	Elegant Trogon	ABNWA02070			S			1B		S3	G5
Pima	BIRD	Camptostoma imberbe	Northern Beardless-Tyrannulet	ABPAE04010			S			1B		S4	G5
Pima	BIRD	Empidonax traillii extimus	Southwestern Willow Flycatcher	ABPAE33043	LE			2	E	1A		S1	G5T2
Pima	BIRD	Empidonax fulvifrons pygmaeus	Northern Buff-breasted Flycatcher	ABPAE33141	SC		S			1B		S1	G5T5
Pima	BIRD	Tyrannus crassirostris	Thick-billed Kingbird	ABPAE52040			S			1B		S2	G5
Pima	BIRD	Pachyramphus aglaiae	Rose-throated Becard	ABPAE53070			S			1B		S1	G4G5
Pima	BIRD	Poliptila nigriceps	Black-capped Gnatcatcher	ABPBJ08040						1B		S1	G5
Pima	BIRD	Catharus ustulatus	Swainson's Thrush	ABPBJ18100						1B		S1	G5
Pima	BIRD	Toxostoma lecontei	Le Conte's Thrasher	ABPBK06100						1B		S3	G4
Pima	BIRD	Peucaea botterii arizonae	Arizona Botteri's Sparrow	ABPBX91063		S				1B		S3?B	G4T4
Pima	BIRD	Peucaea carpalis	Rufous-winged Sparrow	ABPBX91080						1B		S3	G4
Pima	BIRD	Amphispiza quinquestrata	Five-striped Sparrow	ABPBX97030						1B		S1S2	G4

Pima	BIRD	<i>Ammodramus bairdii</i>	Baird's Sparrow	ABPBXA0010	SC		S			1C		S2N	G4
Pima	BIRD	<i>Ammodramus savannarum ammolegus</i>	Arizona grasshopper sparrow	ABPBXA0021		S	S			1B		S1S2	G5TU
Pima	FISH	<i>Gila intermedia</i>	Gila Chub	AFCJB13160	LE				P	1A		S2	G2
Pima	FISH	<i>Agosia chrysoaster chrysoaster</i>	Gila Longfin Dace	AFCJB37151	SC	S			A	1B		S3S4	G4T3T4
Pima	FISH	<i>Catostomus clarkii</i>	Desert Sucker	AFCJC02040	SC	S	S			1B		S3S4	G3G4
Pima	FISH	<i>Cyprinodon macularius</i>	Desert Pupfish	AFCNB02060	LE				P	1A		S1	G1
Pima	FISH	<i>Cyprinodon eremus</i>	Quitobaquito Pupfish	AFCNB02140	LE					1A		S1	G1
Pima	FISH	<i>Poeciliopsis occidentalis occidentalis</i>	Gila Topminnow	AFCNC05021	LE				A	1A		S1S2	G3
Pima	MAMMAL	<i>Sorex arizonae</i>	Arizona Shrew	AMABA01240	SC		S		P	1B		S2	G3
Pima	MAMMAL	<i>Notiosorex cockrumi</i>	Cockrum's Desert Shrew	AMABA05020						1B		S1	GNR
Pima	MAMMAL	<i>Macrotus californicus</i>	California Leaf-nosed Bat	AMACB01010	SC	S				1B		S3	G4
Pima	MAMMAL	<i>Choeronycteris mexicana</i>	Mexican Long-tongued Bat	AMACB02010	SC	S	S		A	1C		S3	G4
Pima	MAMMAL	<i>Leptonycteris curasoae yerbabuena</i>	Lesser Long-nosed Bat	AMACB03030	LE				A	1A		S2S3	G4
Pima	MAMMAL	<i>Myotis velifer</i>	Cave Myotis	AMACC01050	SC	S				1B		S3S4	G5
Pima	MAMMAL	<i>Myotis thysanodes</i>	Fringed Myotis	AMACC01090	SC							S3S4	G4
Pima	MAMMAL	<i>Myotis occultus</i>	Arizona Myotis	AMACC01160	SC	S				1B		S3	G4
Pima	MAMMAL	<i>Lasiurus blossevillii</i>	Western Red Bat	AMACC05060			S			1B		S3	G5
Pima	MAMMAL	<i>Lasiurus xanthinus</i>	Western Yellow Bat	AMACC05070			S			1B		S2S3	G5
Pima	MAMMAL	<i>Corynorhinus townsendii pallescens</i>	Pale Townsend's Big-eared Bat	AMACC08014	SC	S	S	4		1B		S3S4	G3G4T3T4
Pima	MAMMAL	<i>Tadarida brasiliensis</i>	Brazilian Free-tailed Bat	AMACD01010						1B		S3S4	G5
Pima	MAMMAL	<i>Eumops perotis californicus</i>	Greater Western Bonneted Bat	AMACD02011	SC	S				1B		S3	G5T4
Pima	MAMMAL	<i>Eumops underwoodi</i>	Underwood's Bonneted Bat	AMACD02020	SC					1B		S1	G4
Pima	MAMMAL	<i>Nyctinomops femorosaccus</i>	Pocketed Free-tailed Bat	AMACD04010						1B		S3	G4
Pima	MAMMAL	<i>Nyctinomops macrotis</i>	Big Free-tailed Bat	AMACD04020	SC							S3	G5
Pima	MAMMAL	<i>Lepus alleni</i>	Antelope Jackrabbit	AMAEB03070						1B		S3	G5
Pima	MAMMAL	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	AMAFB06010	CCA	S			A	1A		SXS1	G4
Pima	MAMMAL	<i>Sciurus arizonensis</i>	Arizona Gray Squirrel	AMAFB07060					A	1B		S4	G4
Pima	MAMMAL	<i>Peromyscus merriami</i>	Merriam's Deer mouse	AMAFF03020			S					S2	G5
Pima	MAMMAL	<i>Baiomys taylori</i>	Northern Pygmy Mouse	AMAFF05010			S					S3	G4G5
Pima	MAMMAL	<i>Sigmodon ochrognathus</i>	Yellow-nosed Cotton Rat	AMAFF07040	SC					1C		S4	G4G5
Pima	MAMMAL	<i>Panthera onca</i>	Jaguar	AMAJH02010	LE				P	1A		S1	G3
Pima	MAMMAL	<i>Leopardus pardalis</i>	Ocelot	AMAJH05010	LE				P	1A		S1	G4
Pima	MAMMAL	<i>Antilocapra americana sonoriensis</i>	Sonoran Pronghorn	AMALD01012	LE				P	1A		S1	G5T1
Pima	REPTILE	<i>Terrapene ornata luteola</i>	Desert Box Turtle	ARAAD08021		S			PR	1A		S2S3	G5T4
Pima	REPTILE	<i>Kinosternon sonoriense longifemorale</i>	Sonoyta Mud Turtle	ARAAE01041	C*				P	1A		S1	G4T1

Pima	REPTILE	<i>Kinosternon arizonense</i>	Arizona Mud Turtle	ARAAE01060						1B		S2	G4
Pima	REPTILE	<i>Gopherus morafkai</i>	Sonoran Desert Tortoise	ARAAF01013	CCA		S		A	1A		S4	G4
Pima	REPTILE	<i>Heloderma suspectum suspectum</i>	Reticulate Gila Monster	ARACE01012					A	1A		S4	G4T4
Pima	REPTILE	<i>Crotaphytus nebrius</i>	Sonoran Collared Lizard	ARACF04050						1B		S3S4	G4
Pima	REPTILE	<i>Phrynosoma cornutum</i>	Texas Horned Lizard	ARACF12010	SC							S3S4	G4G5
Pima	REPTILE	<i>Sceloporus slevini</i>	Slevin's Bunchgrass Lizard	ARACF14180		S	S			1B		S2	G4
Pima	REPTILE	<i>Uma rufopunctata</i>	Yuman Desert Fringe-toed Lizard	ARACF15040	SC	S			P	1B		S2	G3
Pima	REPTILE	<i>Plestiodon callicephalus</i>	Mountain Skink	ARACH01030			S					S2	G4G5
Pima	REPTILE	<i>Aspidoscelis stictogramma</i>	Giant Spotted Whiptail	ARACJ02011	SC		S			1B		S2	G4
Pima	REPTILE	<i>Aspidoscelis xanthonota</i>	Red-backed Whiptail	ARACJ02012	SC		S			1B		S2	G2
Pima	REPTILE	<i>Aspidoscelis arizonae</i>	Arizona Striped Whiptail	ARACJ02071		S				1B		S1S2	G2
Pima	REPTILE	<i>Lichanura trivirgata</i>	Rosy Boa	ARADA01020	SC				A	1B		S1S2	G4G5
Pima	REPTILE	<i>Chionactis occipitalis klauberi</i>	Tucson Shovel-nosed Snake	ARADB05012	SC					1A		S3	G5T3Q
Pima	REPTILE	<i>Chionactis palarostris organica</i>	Organ Pipe Shovel-nosed Snake	ARADB05021						1B		S1	G3G4T2
Pima	REPTILE	<i>Hypsiglena sp. nov.</i>	Hooded Nightsnake	ARADB18050						1B		S4	G4
Pima	REPTILE	<i>Coluber bilineatus</i>	Sonoran Whipsnake	ARADB21010						1B		S5	G5
Pima	REPTILE	<i>Oxybelis aeneus</i>	Brown Vinesnake	ARADB24010			S			1B		S1	G5
Pima	REPTILE	<i>Phyllorhynchus browni</i>	Saddled Leaf-nosed Snake	ARADB25010					PR	1B		S5	G5
Pima	REPTILE	<i>Thamnophis eques megalops</i>	Northern Mexican Gartersnake	ARADB36061	LT		S		A	1A		S1	G4T3
Pima	REPTILE	<i>Senticolis triaspis intermedia</i>	Northern Green Ratsnake	ARADB44011			S			1B		S3	G5T4
Pima	REPTILE	<i>Crotalus lepidus klauberi</i>	Banded Rock Rattlesnake	ARADE02051					PR	1A		S3	G5T5
Pima	REPTILE	<i>Crotalus pricei</i>	Twin-spotted Rattlesnake	ARADE02080			S		PR	1A		S2	G5
Pima	INVERTEBRATE	<i>Argia sabino</i>	Sabino Canyon Dancer	IIDO68100	SC		S					S2	G2
Pima	INVERTEBRATE	<i>Sonorella eremita</i>	San Xavier Talussnail	IMGASC9240	CCA					1A		S1	G1
Pima	INVERTEBRATE	<i>Sonorella magdalenensis</i>	Sonoran Talussnail	IMGASC9370			S			1C		S2	G2G3
Pima	INVERTEBRATE	<i>Sonorella papagorum</i>	Black Mountain Talussnail	IMGASC9480						1B		S1	G1
Pima	INVERTEBRATE	<i>Tryonia quitobaquita</i>	Quitobaquito Tryonia	IMGASJ7130	SC					1A		S1	G1
Pima	PLANT	<i>Lilaeopsis schaffneriana ssp. recurva</i>	Huachuca Water-umbel	PDAPI19051	LE						HS	S2	G4T2
Pima	PLANT	<i>Amsonia grandiflora</i>	Large-flowered Blue Star	PDAP003060	SC		S					S2	G2
Pima	PLANT	<i>Amsonia kearneyana</i>	Kearney's Blue-star	PDAP0030M0	LE						HS	S1	G1
Pima	PLANT	<i>Asclepias lemmonii</i>	Lemmon Milkweed	PDASC02020			S					S2	G4?
Pima	PLANT	<i>Metastelma mexicanum</i>	Wiggins Milkweed Vine	PDASC050P0	SC		S					S1S2	G3G4
Pima	PLANT	<i>Erigeron piscaticus</i>	Fish Creek Fleabane	PDAST3M4X0	SC	S	S				SR	S1	G1
Pima	PLANT	<i>Erigeron arisolius</i>	Arid Throne Fleabane	PDAST3M510			S					S2	G2
Pima	PLANT	<i>Heterotheca rutteri</i>	Huachuca Golden Aster	PDAST4V0J0	SC	S	S					S2	G2

Pima	PLANT	Hieracium pringlei	Pringle Hawkweed	PDAST4W170	SC							S1	G2Q	
Pima	PLANT	Pectis imberbis	Beardless Chinch Weed	PDAST6W0A0	SC		S					S1	G3	
Pima	PLANT	Perityle ajoensis	Ajo Rock Daisy	PDAST700Y0							SR	S1	G1	
Pima	PLANT	Packera neomexicana var. toumeyi	Toumey Groundsel	PDAST8H274			S					S2	G5T2Q	
Pima	PLANT	Stevia lemmonii	Lemmon's Stevia	PDAST8V010			S					S2	G3G4	
Pima	PLANT	Berberis harrisoniana	Kofa Mt Barberry	PDBER02030		S						S1	G1G2	
Pima	PLANT	Amoreuxia gonzalezii	Saiya	PDBIX01010	SC		S				HS	S1	G1	
Pima	PLANT	Pennellia tricornuta	Chiricahua Rock Cress	PDBRA06200			S					S1S2	G1	
Pima	PLANT	Coryphantha scheeri var. robustispina	Pima Pineapple Cactus	PDCAC040C1	LE						HS	S2	G4T2	
Pima	PLANT	Echinocactus horizonthalonius var. nicholii	Nichol Turk's Head Cactus	PDCAC05022	LE						HS	S2	G4T2	
Pima	PLANT	Echinocereus fasciculatus	Magenta-flower Hedgehog-cactus	PDCAC06065							SR	S3	G4G5T4T5	
Pima	PLANT	Echinocereus nicholii	Nichol's Hedgehog Cactus	PDCAC060L0							SR	S2	G4?Q	
Pima	PLANT	Ferocactus cylindraceus	Desert Barrel Cactus	PDCAC08080						PR		SR	S4	G5
Pima	PLANT	Ferocactus emoryi	Emory's Barrel-cactus	PDCAC08090								SR	S1S2	G4
Pima	PLANT	Mammillaria heyderi var. bullingtoniana	Cream Cactus	PDCAC0A035								SR	S1S2	G4?T2T4
Pima	PLANT	Mammillaria mainiae	Counter Clockwise Fishhook Cactus	PDCAC0A060								SR	S1	G3
Pima	PLANT	Mammillaria thornberi	Thornber Fishhook Cactus	PDCAC0A0C0								SR	S4	G4
Pima	PLANT	Mammillaria viridiflora	Varied Fishhook Cactus	PDCAC0A0D0								SR	S4	G4
Pima	PLANT	Opuntia versicolor	Stag-horn Cholla	PDCAC0D1K0								SR	S2S3	G4
Pima	PLANT	Opuntia engelmannii var. flavispina		PDCAC0D224								SR	S3?	G5T3?
Pima	PLANT	Cylindropuntia x kelvinensis	Kelvin Cholla	PDCAC0D2M0								SR	SHYB	GNA
Pima	PLANT	Echinomastus erectocentrus var. acunensis	Acuna Cactus	PDCAC0J0E1	LE					P		HS	S1	G3T1T2Q
Pima	PLANT	Echinomastus erectocentrus var. erectocentru	Needle-spined Pineapple Cactus	PDCAC0J0E2	SC							SR	S3	G3T3Q
Pima	PLANT	Echinomastus intertextus	White Fishhook Cactus	PDCAC0J0G0								SR	S2	G4G5
Pima	PLANT	Peniocereus greggii var. transmontanus	Desert Night-blooming Cereus	PDCAC0V012							PR	SR	S3S4	G3G4T3T4
Pima	PLANT	Peniocereus striatus	Dahlia Rooted Cereus	PDCAC0V020								SR	S1	G4
Pima	PLANT	Stenocereus thurberi	Organ Pipe Cactus	PDCAC10020								SR	S4	G5
Pima	PLANT	Lophocereus schottii	Senita	PDCAC14010								SR	S1S2	G4
Pima	PLANT	Lobelia fenestralis	Leafy Lobelia	PDCAM0E0H0								SR	S1	G4
Pima	PLANT	Graptopetalum bartramii	Bartram Stonecrop	PDCRA06010	SC	S	S					SR	S3	G3
Pima	PLANT	Tumamoca macdougalii	Tumamoc Globeberry	PDCUC0S010		S	S					SR	S3	G4
Pima	PLANT	Manihot davisiae	Arizona Manihot	PDEUP0Z010			S						S2	G4
Pima	PLANT	Tragia laciniata	Sonoran Noseburn	PDEUP1D060			S						S3?	G3G4
Pima	PLANT	Dalea tentaculoides	Gentry's Indigo Bush	PDFAB1A1K0	SC	S	S					HS	S1	G1
Pima	PLANT	Lupinus huachucanus	Huachuca Mountain Lupine	PDFAB2B210			S						S2	G2

Pima	PLANT	Lupinus lemmonii	Lemmon's Lupine	PDFAB2B2A0			S					S1Q	G1Q	
Pima	PLANT	Lysiloma watsonii	Littleleaf False Tamarind	PDFAB2C040							SR	S1	G4?	
Pima	PLANT	Abutilon parishii	Pima Indian Mallow	PDMAL020E0	SC	S	S				SR	S3	G2	
Pima	PLANT	Pseudabutilon thurberi	Thurber Indian Mallow	PDMAL020P0							SR	SH	G2?	
Pima	PLANT	Passiflora arizonica	Arizona Passionflower	PDPAS01073			S					S2	G5T3T5	
Pima	PLANT	Eriogonum capillare	San Carlos Wild-buckwheat	PDPGN08100	SC						SR	S4	G4	
Pima	PLANT	Eriogonum terrenatum	San Pedro River Wild Buckwheat	PDPGN08760		S						S1S2	G1	
Pima	PLANT	Samolus vagans	Chiricahua Mountain Brookweed	PDPRI09040			S					S2	GUQ	
Pima	PLANT	Potentilla albiflora	White-flowered Cinquefoil	PDROS1B010			S					S1S2	G1G2	
Pima	PLANT	Vauquelinia californica ssp. sonorensis	Arizona Sonoran Rosewood	PDROS1R024		S						S1S2	G4T1	
Pima	PLANT	Penstemon discolor	Catalina Beardtongue	PDSCR1L210			S				HS	S2	G2	
Pima	PLANT	Capsicum annuum var. glabriusculum	Chiltepin	PDSOL06012			S					S2	G5T5	
Pima	PLANT	Physalis latiphysa	Broadleaf Groundcherry	PDSOL0S0H0			S					S1	G1	
Pima	PLANT	Ayenia jaliscana	Ayenia	PDSTE010C0			S					S1	GNR	
Pima	PLANT	Viola umbraticola	Shade Violet	PDVIO042E0			S					S2?	G3G4	
Pima	PLANT	Agave parviflora ssp. parviflora	Santa Cruz Striped Agave	PMAGA010L2	SC		S			A		HS	S3	G3T3
Pima	PLANT	Agave schottii var. treleasei	Trelease Agave	PMAGA010N2	SC		S					HS	S1	G5T1Q
Pima	PLANT	Carex chihuahuensis	Chihuahuan Sedge	PMCYP032T0			S					S2S3	G3G4	
Pima	PLANT	Carex ultra	Arizona Giant Sedge	PMCYP03E50		S	S					S2	G3?	
Pima	PLANT	Sisyrinchium cernuum	Nodding Blue-eyed Grass	PMIRI0D0B0			S					S2	G5	
Pima	PLANT	Allium gooddingii	Goodding Onion	PMLIL02120	CCA		S	3				HS	S3S4	G4
Pima	PLANT	Allium plummerae	Plummer Onion	PMLIL021V0								SR	S3	G4
Pima	PLANT	Lilium parryi	Lemon Lily	PMLIL1A0J0	SC		S					SR	S2	G3
Pima	PLANT	Triteleopsis palmeri	Blue Sand Lily	PMLIL22010		S						SR	S1	G3
Pima	PLANT	Hexalectris arizonica	Arizona Crested coral-root	PMORC1C041			S					SR	S1S2	G5T2T4
Pima	PLANT	Hexalectris colemanii	Coleman's coral-root	PMORC1C060			S					S2	G1G2	
Pima	PLANT	Listera convallarioides	Broad-leaved Twayblade	PMORC1N050								SR	S1	G5
Pima	PLANT	Malaxis abieticola	Slender-flowered Malaxis	PMORC1R090								SR	S1	G4
Pima	PLANT	Platanthera limosa	Thurber's Bog Orchid	PMORC1Y0G0								SR	S4	G4
Pima	PLANT	Schiedeella arizonica	Fallen Ladies'-tresses	PMORC67020								SR	S4	GNR
Pima	PLANT	Muhlenbergia elongata	Sycamore Muhly	PMPOA48220			S					S1	G3	
Pima	PLANT	Muhlenbergia palmeri	Palmer's Muhly	PMPOA48350			S					S1S2	GNR	
Pima	PLANT	Notholaena lemmonii	Lemmon Cloak Fern	PPADIOG0D0	SC							S1S2	G3?	
Pima	PLANT	Asplenium dalhousiae	Dalhouse Spleenwort	PPASP020A0		S						S1	GNR	
Pima	PLANT	Psilotum nudum	Whisk Fern	PPPSI01020			S					HS	S1	G5

Pima	PLANT	<i>Thelypteris puberula</i> var. <i>sonorensis</i>	Aravaipa Woodfern	PPTHE05192		S	S					S2	G5T3
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**APPENDIX G**  
**AIR QUALITY CALCULATIONS**



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CALCULATION SHEET-COMBUSTION EMISSIONS-CONSTRUCTION

Assumptions for Combustion Emissions						
Type of Construction Equipment	Num. of Units	HP Rated	Hrs/day	Days/yr	Total hp-hrs	
Water Truck	2	300	8	240	1,152,000	
Diesel Road Compactors	1	100	8	180	144,000	
Diesel Dump Truck	2	300	8	180	864,000	
Diesel Excavator	1	300	8	180	432,000	
Diesel Hole Trenchers	1	175	8	180	252,000	
Diesel Bore/Drill Rigs	2	300	8	180	864,000	
Diesel Cement & Mortar Mixers	2	300	8	180	864,000	
Diesel Cranes	1	175	8	180	252,000	
Diesel Graders	1	300	8	180	432,000	
Diesel Tractors/Loaders/Backhoes	2	100	8	180	288,000	
Diesel Bulldozers	2	300	8	180	864,000	
Diesel Front-End Loaders	2	300	8	180	864,000	
Diesel Forklifts	2	100	8	180	288,000	
Diesel Generator Set	3	40	8	180	172,800	

Type of Construction Equipment	Emission Factors <sup>1</sup>						
	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	PM-10 g/hp-hr	PM-2.5 g/hp-hr	SO <sub>2</sub> g/hp-hr	CO <sub>2</sub> g/hp-hr
Water Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Road Compactors	0.370	1.480	4.900	0.340	0.330	0.740	536.200
Diesel Dump Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Excavator	0.340	1.300	4.600	0.320	0.310	0.740	536.300
Diesel Trenchers	0.510	2.440	5.810	0.460	0.440	0.740	535.800
Diesel Bore/Drill Rigs	0.600	2.290	7.150	0.500	0.490	0.730	529.700
Diesel Cement & Mortar Mixers	0.610	2.320	7.280	0.480	0.470	0.730	529.700
Diesel Cranes	0.440	1.300	5.720	0.340	0.330	0.730	530.200
Diesel Graders	0.350	1.360	4.730	0.330	0.320	0.740	536.300
Diesel Tractors/Loaders/Backhoes	1.850	8.210	7.220	1.370	1.330	0.950	691.100
Diesel Bulldozers	0.360	1.380	4.760	0.330	0.320	0.740	536.300
Diesel Front-end Loaders	0.380	1.550	5.000	0.350	0.340	0.740	536.200
Diesel Forklifts	1.980	7.760	8.560	1.390	1.350	0.950	690.800
Diesel Generator Set	1.210	3.760	5.970	0.730	0.710	0.810	587.300

MOVES2010a MODEL ON-ROAD TRANSPORTATION AIR EMISSIONS-  
DELIVERY MATERIALS AND COMMUTING DURING CONSTRUCTION ACTIVITIES

Assumptions for Combustion Emissions					
Type of Construction Equipment	Num. of Units	HP Rated	Hrs/day	Days/yr	Total hp-hrs
Propane Generator Set Back-up	7	25	4	24	16800
Propane Generator Set-Primary	10	25	8	365	730000

Emission Factors <sup>i</sup>						
Type of Construction Equipment	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	PM-10 g/hp-hr	PM-2.5 g/hp-hr	CO2 g/hp-hr
Propane Generator Set Back-up	2.03	31.91	9.93	0.06	0.06	653.9
Propane Generator Set-Primary	2.03	31.91	9.93	0.06	0.06	653.9

Emission Calculations						
Type of Construction Equipment	VOC tons/yr	CO tons/yr	NOx tons/yr	PM-10 tons/yr	PM-2.5 tons/yr	CO2 tons/yr
Propane Generator Set Back-up	0.04	0.59	0.18	0.00	0.00	12.11
Propane Generator Set-Primary	1.64	25.67	7.99	0.05	0.05	526.00
<b>Total Emissions</b>	<b>1.67</b>	<b>26.27</b>	<b>8.17</b>	<b>0.05</b>	<b>0.05</b>	<b>538.11</b>

Conversion factors	
Grams to tons	1.102E-06

<sup>i</sup> Emission factors (EF) were generated using USEPA's preferred model for nonroad sources, the NONROAD2008 model. Emissions were modeled for the 2007 calendar year. The VOC EFs includes exhaust and evaporative emissions. The VOC evaporative components included in the NONROAD2008 model are diurnal, hotsoak, running loss, tank permeation, hose permeation, displacement, and spillage. The construction equipment age distribution in the NONROAD2008 model is based on the population in U.S. for the 2007 calendar year.

MOVES2010a MODEL ON-ROAD TRANSPORTATION AIR EMISSIONS-  
ONGOING OPERATIONS

MOVES 2010a						
Source	Fuel type	Number of vehicles	Miles traveled per day	Days of travel per year	Miles traveled per year	
Passenger cars	Gasoline	2	60	180	21,600	
Passenger truck	Gasoline	2	60	180	21,600	
Light commercial truck	Diesel	1	60	180	10,800	
Short-haul truck	Diesel	1	60	180	10,800	
Long-haul truck	Diesel	1	60	180	10,800	

Emission Factors (MOVES 2010a Emission Rates) <sup>j</sup>							
Source	VOC (g/mile)	CO (g/mile)	NOx (g/mile)	PM-10 (g/mile)	PM-2.5 (g/mile)	SO <sub>2</sub> (g/mile)	CO <sub>2</sub> and CO <sub>2</sub> Equivalents (g/mile)
Passenger cars	8.497	2.892	0.576	0.019	0.018	0.005	320
Passenger truck	3.645	5.449	1.168	0.027	0.025	0.007	439
Light commercial	4.460	2.158	2.986	0.164	0.190	0.005	609
Short-haul truck	2.438	2.273	6.095	0.270	0.313	0.007	929
Long-haul truck	2.519	3.610	14.776	0.625	0.726	0.016	2,020

Total Emission for On-Road Commuter Activities (tons/year)							
Source	VOC	CO	NOx	PM-10	PM-2.5	SO <sub>2</sub>	CO <sub>2</sub> and CO <sub>2</sub> Equivalents
Passenger cars	0.20	0.07	0.01	0.00	0.00	0.00	8
Passenger truck	0.09	0.13	0.03	0.00	0.00	0.00	10
Light commercial truck	0.05	0.03	0.04	0.00	0.00	0.00	7
Short-haul truck	0.03	0.03	0.07	0.00	0.00	0.00	11
Long-haul truck	0.03	0.04	0.18	0.01	0.01	0.00	24
Total	0.40	0.29	0.33	0.01	0.01	0.00	60

Key:  
Short-haul trucks category includes trucks such as dump trucks and cement trucks.  
Long-haul trucks category includes trucks such as semi-trailers (18-wheelers).

MOVES2010a MODEL ON-ROAD TRANSPORTATION AIR EMISSIONS-  
ONGOING OPERATIONS

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<sup>i</sup> Emission factors were generated by the USEPA preferred model MOVES2010a. MOVES simulates daily motor vehicle operations and produces emission rates. MOVES emission rates include sources from engine combustion, tire wear, brake wear, evaporative fuel permeation, vapor venting and leaking (running and parking), and crankcase loss. Emission rates are daily averages for each of the criteria pollutants. The averages are from a combination of vehicle operations such as stop and go, highway travel, acceleration at on-ramps, parking, start-up, extended idle, etc.

CALCULATION SHEET-COMBUSTION EMISSIONS-CONSTRUCTION

Emission Calculations							
Type of Construction Equipment	VOC tons/yr	CO tons/yr	NOx tons/yr	PM-10 tons/yr	PM-2.5 tons/yr	SO <sub>2</sub> tons/yr	CO <sub>2</sub> tons/yr
Water Truck	0.559	2.628	6.970	0.520	0.508	0.939	680.454
Diesel Road Paver	0.059	0.235	0.778	0.054	0.052	0.117	85.089
Diesel Dump Truck	0.419	1.971	5.227	0.390	0.381	0.705	510.341
Diesel Excavator	0.162	0.619	2.190	0.152	0.148	0.352	255.313
Diesel Hole Cleaners\Trenchers	0.142	0.678	1.613	0.128	0.122	0.206	148.794
Diesel Bore/Drill Rigs	0.571	2.180	6.808	0.476	0.467	0.695	504.342
Diesel Cement & Mortar Mixers	0.581	2.209	6.931	0.457	0.448	0.695	504.342
Diesel Cranes	0.122	0.361	1.588	0.094	0.092	0.203	147.239
Diesel Graders	0.167	0.647	2.252	0.157	0.152	0.352	255.313
Diesel Tractors/Loaders/Backhoes	0.587	2.606	2.291	0.435	0.422	0.302	219.339
Diesel Bulldozers	0.343	1.314	4.532	0.314	0.305	0.705	510.626
Diesel Front-end Loaders	0.362	1.476	4.761	0.333	0.324	0.705	510.531
Diesel Forklift	0.628	2.463	2.717	0.441	0.428	0.302	219.243
Diesel Generator Set	0.230	0.716	1.137	0.139	0.135	0.154	111.837
<b>Total Emissions</b>	<b>4.931</b>	<b>20.102</b>	<b>49.795</b>	<b>4.092</b>	<b>3.983</b>	<b>6.431</b>	<b>4662.803</b>

Conversion factors	
Grams to tons	1.102E-06

<sup>i</sup> Emission factors (EF) were generated using USEPA's preferred model for nonroad sources, the NONROAD2008 model. Emissions were modeled for the 2007 calendar year. The VOC EFs include exhaust and evaporative emissions. The VOC evaporative components included in the NONROAD2008 model are diurnal, hotsoak, running loss, tank permeation, hose permeation, displacement, and spillage. The construction equipment age distribution in the NONROAD2008 model is based on the population in U.S. for the 2007 calendar year.

CALCULATION SHEET-FUGITIVE DUST-CONSTRUCTION

Assumptions for Combustion Emissions

Construction Fugitive Dust Emission Factors Emission Factor	Units	Source
General Construction Activities	0.19 ton PM-10/acre-month	MRI 1996; EPA 2001; EPA 2006
New Road Construction	0.42 ton PM-10/acre-month	MRI 1996; EPA 2001; EPA 2006

**PM-2.5 Emissions**

PM-2.5 Multiplier	0.10	10% of PM-10 emissions assumed to be PM-2.5)	EPA 2001; EPA 2006
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<b>Control Efficiency</b>	0.50	(assume 50% control efficiency for PM-10 and PM-2.5 emissions)	EPA 2001; EPA 2006
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**Project Assumptions**

**Construction Area (0.19 ton PM-10/acre-month)**

Duration of Soil Disturbance in	6	Months	0.000022957	acres per foot
Length	10	Miles	5280	feet per mile
Length (converted)	52800	Feet		
Width	70	feet		
Area	84.85	acres		

**Staging Areas**

Duration of Construction Project	6	months		
Length		miles		
Length (converted)		Feet		
Width		Feet		
Area	2.00	acres		

\* Assume that construction activities during road modification are limited to 10 miles area during any given construction day.

PM-10 uncontrolled	Project Emissions (tons/year)		
	PM-10 controlled	PM-2.5 uncontrolled	PM-2.5 controlled
Construction Area (0.19 ton PM-10/a)	96.73	48.36	9.67
Staging Areas	0.38	0.19	0.04
<b>Total</b>	<b>97.11</b>	<b>48.55</b>	<b>9.71</b>

Assumptions for Fugitive Emissions

**General Construction Activities Emission Factor**      **.19 ton PM-10/acre-month**      Source: MRI 1996; EPA 2001; EPA 2006

The area-based emission factor for construction activities is based on a study completed by the Midwest Research Institute (MRI) Improvement of Specific Emission Factors (BACM Project No. 1), March 29, 1996. The MRI study evaluated seven construction projects in Nevada and California (Las Vegas, Coachella Valley, South Coast Air Basin, and the San Joaquin Valley). The study determined an average emission factor of 0.11 ton PM-10/acre-month for sites without large-scale cut/fill operations. A worst-case emission factor of 0.42 ton PM-10/acre-month was calculated for sites with active large-scale earth moving operations. The monthly emission factors are based on 168 work-hours per month (MRI 1996). A subsequent MRI Report in 1999, Estimating Particulate Matter Emissions from Construction Operations, calculated the 0.19 ton PM-10/acre-month emission factor by applying 25% of the large-scale earthmoving emission factor (0.42 ton PM-10/acre-month) and 75% of the average emission factor (0.11 ton PM-10/acre-month).

The 0.19 ton PM-10/acre-month emission factor is referenced by the EPA for non-residential construction activities in recent procedures documents for the National Emission Inventory (EPA 2001; EPA 2006). The 0.19 ton PM-10/acre-month emission factor represents a refinement of EPA's original AP-42 area-based total suspended particle (TSP) emission factor in Section 13.2.3 Heavy Construction Operations. In addition to the EPA, this methodology is also supported by the South Coast Air Quality Management District and the Western Regional Air Partnership (WRAP) which is funded by the EPA and is administered jointly by the Western Governor's Association and the National Tribal Environmental Council. The emission factor is assumed to encompass a variety of non-residential construction activities including building construction (commercial, industrial, institutional, governmental), public works, and travel on unpaved roads. The EPA National Emission Inventory documentation assumes that the emission factors are uncontrolled and recommends a control efficiency of 50% for PM-10 and PM-2.5 in PM nonattainment areas.

**New Road Construction Emission Factor**

**0.42 ton PM-10/acre-month** Source: MRI 1996; EPA 2001; EPA 2006

The emission factor for new road construction is based on the worst-case conditions emission factor from the MRI 1996 study described above (0.42 tons PM-10/acre-month). It is assumed that road construction involves extensive earthmoving and heavy construction vehicle travel

resulting in emissions that are higher than other general construction projects. The 0.42 ton PM-10/acre-month emission factor for road construction is referenced in recent procedures documents for the EPA National Emission Inventory (EPA 2001; EPA 2006).

**PM-2.5 Multiplier**

**0.10**

PM-2.5 emissions are estimated by applying a particle size multiplier of 0.10 to PM-10 emissions. This methodology is consistent with the procedures documents for the National Emission Inventory (EPA 2006).

**Control Efficiency for PM-10 and PM-2.5**

**0.50**

The EPA National Emission Inventory documentation recommends a control efficiency of 50% for PM-10 and PM-2.5 in PM nonattainment areas. Wetting controls will be applied during project construction (EPA 2006).

**References:**

EPA 2001. *Procedures Document for National Emissions Inventory, Criteria Air Pollutants, 1985-1999*. EPA-454/R-01-006. Office of Air Quality Planning and Standards, United States Environmental Protection Agency. March 2001.

EPA 2006. *Documentation for the Final 2002 Nonpoint Sector (Feb 06 version) National Emission Inventory for Criteria and Hazardous Air Pollutants*. Prepared for: Emissions Inventory and Analysis Group (C339-02) Air Quality Assessment Division Office of Air Quality Planning and Standards, United States Environmental Protection Agency. July 2006.

MRI 1996. *Improvement of Specific Emission Factors (BACM Project No. 1)*. Midwest Research Institute (MRI). Prepared for the California South Coast Air Quality Management District, March 29, 1996



Generator Emissions

Assumptions for Combustion Emissions						
Type of Construction Equipment	Num. of Units	HP Rated	Hrs/day	Days/yr	Total hp-hrs	
Propane Generator Set Back-up	7	25	4	24	16800	
Propane Generator Set-Primary	10	25	8	365	730000	

Emission Factors <sup>1</sup>						
Type of Construction Equipment	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	PM-10 g/hp-hr	PM-2.5 g/hp-hr	SO <sub>2</sub> g/hp-hr
Propane Generator Set Back-up	2.03	31.91	9.93	0.06	0.06	0.01
Propane Generator Set-Primary	2.03	31.91	9.93	0.06	0.06	0.01

Emission Calculations						
Type of Construction Equipment	VOC tons/yr	CO tons/yr	NOx tons/yr	PM-10 tons/yr	PM-2.5 tons/yr	SO <sub>2</sub> tons/yr
Propane Generator Set Back-up	0.04	0.59	0.18	0.00	0.00	0.00
Propane Generator Set-Primary	1.64	25.67	7.99	0.05	0.05	0.01
<b>Total Emissions</b>	<b>1.67</b>	<b>26.27</b>	<b>8.17</b>	<b>0.05</b>	<b>0.05</b>	<b>0.01</b>

Conversion factors	
Grams to tons	1.102E-06

<sup>1</sup> Emission factors (EF) were generated using USEPA's preferred model for nonroad sources, the NONROAD2008 model. Emissions were modeled for the 2007 calendar year. The VOC EFs includes exhaust and evaporative emissions. The VOC evaporative components included in the NONROAD2008 model are diurnal, hotsoak, running loss, tank permeation, hose permeation, displacement, and spillage. The construction equipment age distribution in the NONROAD2008 model is based on the population in U.S. for the 2007 calendar year.

CALCULATION SHEET-SUMMARY OF EMISSIONS

Summary of Emissions (tons/year) <sup>i</sup>										
Emission Source	VOC	CO	NOx	PM-10	PM-2.5	SO2	CO2	CO2 Equivalents	Total CO2	
Combustion Emissions	4.93	20.10	49.79	4.09	3.98	6.43	4662.80	15,610	20,272	
Construction Site-Fugitive PM-10	NA	NA	NA	48.55	4.86	NA	NA	NA	NA	NA
Construction Workers Commuter & Trucking	6.18	4.31	1.75	0.06	0.07	0.01	NA	502	502	
<b>Total Emissions-CONSTRUCTION</b>	<b>11.11</b>	<b>24.41</b>	<b>51.55</b>	<b>52.71</b>	<b>8.91</b>	<b>6.44</b>	<b>4663</b>	<b>16,112</b>	<b>20,775</b>	
Operational Emissions	0.40	0.29	0.33	0.01	0.01	0.00	NA	60	60	
Generators	1.67	26.27	8.17	0.05	0.05	0.01	538.11	2,583	3,121	
<b>Total Operational Emissions</b>	<b>2.08</b>	<b>26.56</b>	<b>8.50</b>	<b>0.06</b>	<b>0.06</b>	<b>0.01</b>	<b>538</b>	<b>2,643</b>	<b>3,181</b>	
<i>De minimis</i> Threshold (1)	100	100	100	70	100	100	NA	NA	25,000	

Carbon Equivalents	Conversion Factor
N2O or NOx	311
Methane or VOCs	25

Source: EPA 2010 Reference, Tables and Conversions, Inventory of U.S. Greenhouse Gas Emissions and Sinks; <http://www.epa.gov/climatechange/emissions/usinventoryreport.html>

<sup>i</sup> Pima County is a moderate non-attainment area for PM-10 area for CO (USEPA 2013b)